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THE

NAUTICAL ALMANAC

AND

ASTRONOMICAL EPHEMERIS,

FOR THE YEAR 1791.

Publiſhed by ORDER of the

COMMISSIONERS OF LONGITUDE.

LONDON:
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MDCCLXXXVI.

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EXTRACT from the Act of Parliament concerning the Longitude, made in the Fifth Year of the Reign of his preſent Majeſty.

WHEREAS the Publication of Nautical Almanacs conſtructed by proper Perſons, under the Direction of the ſaid Commiſſioners, would greatly contribute to make the ſaid Lunar Tables more generally uſeful; Be it further Enacted, by the Authority aforeſaid, That it ſhall and may be lawful to and for the ſaid Commiſſioners to cauſe ſuch Nautical Almanacs, or other uſeful Tables, to be conſtructed, and to print, publiſh, and vend, or cauſe to be printed, publiſhed, and vended, any Nautical Almanac or Almanacs, or other uſeful Table or Tables, which they, or the major Part of them, ſhall, from time to time, judge neceſſary and uſeful, in order to facilitate the Method of diſcovering the Longitude at Sea; any Law, Statute, excluſive Privilege, private Charter, or other Cuſtom, to the contrary thereof notwithſtanding.

And be it Enacted, by the Authority aforeſaid, That no Perſon or Perſons ſhall print, publiſh, or vend, or cauſe to be printed, publiſhed, or vended, any Nautical Almanac or Almanacs, or other Table or Tables conſtructed under the Direction of the ſaid Commiſſioners, without being firſt licenſed by the ſaid Commiſſioners, or the major Part of them: And if any Perſon or Perſons not ſo licenſed, or not being authorized by the Perſon or Perſons ſo licenſed by the ſaid Commiſſioners, ſhall print, publiſh, or vend, or cauſe to be printed, publiſhed, or vended, any ſuch Nautical Almanac or Almanacs, or other Table or Tables, every ſuch Perſon or Perſons ſhall, for every Copy of ſuch Nautical Almanac or Table ſo printed, publiſhed, or vended, forfeit and pay the Sum of Twenty Pounds; to be recovered by Action of Debt, Bill, Plaint, or Information, in any of his Majeſty's Courts of Record at *Weſtminſter*; and that One Moiety of ſuch Penalty and Forfeiture ſhall be to his Majeſty, his Heirs and Succeſſors, and the other Moiety to him or them that ſhall proſecute, inform, or ſue for the ſame.

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EXTRACT

EXTRACT of an Act for the Repeal of all former Acts concerning the Longitude at Sea, except ſo much thereof as relates to the Appointment and Authority of the Commiſſioners thereby conſtituted, and alſo ſuch Clauſes as relate to the conſtructing, printing, publiſhing, vending, and licenſing of Nautical Almanacs and other uſeful Tables; and for the more effectual Encouragement and Reward of ſuch Perſon and Perſons as ſhall diſcover a Method for finding the ſame, or ſhall make uſeful Diſcoveries in Navigation; and for the better making Experiments relating thereto: Made in the Fourteenth Year of the Reign of his preſent Majeſty.

BE it Enacted by the KING's Moſt Excellent Majeſty, by and with the Advice and Conſent of the Lords Spiritual and Temporal, and Commons, in this preſent Parliament aſſembled, and by the Authority of the ſame, That each and every of the ſaid recited Acts (ſave and except ſuch Clauſe and Clauſes in each or any of them as relate to the Appointment or Authority of all or any of the Commiſſioners thereby reſpectively conſtituted, and alſo ſuch Clauſe and Clauſes as relate to the conſtructing, printing, publiſhing, vending, and licenſing of Nautical Almanacs, and other uſeful Tables) ſhall, from and after the Twenty-fourth Day of *June* One thouſand Seven hundred and Seventy-four, be, and are hereby repealed.

And, for a due and ſufficient Encouragement to any Perſon or Perſons who ſhall diſcover any Method or Methods for finding the ſaid Longitude, Be it Enacted by the Authority aforeſaid, That the Firſt Author or Authors, Diſcoverer or Diſcoverers, of each and every ſuch Method or Methods, his or their Executors, Adminiſtrators, or Aſſigns, ſhall be intitled to and have the Rewards or Sums of Money herein-after mentioned; that is to ſay, In caſe the Method propoſed ſhall be, by means of a Timekeeper, the Principles whereof have not hitherto been made public, to the Reward or Sum of Five thouſand

Pounds, if ſuch Method determines the ſaid Longitude to One Degree of a great Circle, or Sixty geographical Miles; to the Reward or Sum of Seven thouſand Five hundred Pounds, if it determines the ſame to Two Thirds of that Diſtance; and to the Reward or Sum of Ten thouſand Pounds, if it determines the ſame to One Half of the ſaid Diſtance: Which reſpective Rewards ſhall be due and paid when ſuch Method ſhall have been ſufficiently tried by the following Experiments and Voyages to be made and performed by ſuch Perſons, and under ſuch Reſtrictions, as the ſaid Commiſſioners for the Diſcovery of Longitude at Sea reſpectively conſtituted by the aboverecited Acts, or the major Part of them, ſhall think fit to appoint and direct; (that is to ſay), When and ſo ſoon as Two or more Time-keepers of the ſame Conſtruction ſhall have been tried at the ſame Time, for the Space of Twelve Months, at the Royal Obſervatory at *Greenwich*, then in Two Voyages round the Iſland of *Great Britain*, in contrary Directions, and in ſuch other Voyages to different Climates as the ſaid Commiſſioners ſhall think fit to direct and appoint; and after their Return from ſuch Voyages, or any of them, for ſuch longer Time, at the ſaid Obſervatory, not exceeding Twelve Months, as the ſaid Commiſſioners ſhall judge neceſſary; and alſo when and ſo ſoon as the ſaid Commiſſioners, or Two Thirds of them at the leaſt, ſhall, after ſuch Experiments and Voyages have been made and performed as aforeſaid, have declared and determined that ſuch Method is generally practicable and uſeful, and ſufficiently exact to determine the Longitude at Sea within the Degrees or Limits aforeſaid, in all Voyages for the Space of Six Months, (Impediments from cloudy and hazy Weather excepted); and alſo when and ſo ſoon as the Principles and Practice of ſuch Method are fully diſcovered and explained to the Satisfaction of the ſaid Commiſſioners, or Two Thirds of them at leaſt; and ſuch Author or Authors, Diſcoverer or Diſcoverers, ſhall have delivered up and aſſigned over to the ſaid Commiſſioners, for the Uſe of the Public, the abſolute Property of ſuch Time-keepers as ſhall have been tried by ſuch Experiments and Voyages as aforeſaid, together with all Plates, Deſcriptions, Theories, and Explanations belonging or relating to the ſame, and which ſhall contain the Whole of ſuch Diſcovery of the Longitude; and in caſe the Method propoſed ſhall be by means of improved Solar and Lunar Tables, then and in ſuch Caſe the Author or Authors of ſuch improved Solar and Lunar Tables, their Executors, Adminiſtrators, or Aſſigns, ſhall be intitled to and have the Reward or Sum of Five thouſand Pounds, if ſuch Solar and Lunar Tables ſhall prove ſufficiently exact to ſhew the Diſtance of the Moon from the Sun and Stars in the Heavens within Fifteen Seconds of a Degree, anſwering to about Seven Minutes of Longitude, after making an Allowance of Half a Degree for the Errors of Obſervation; and when it ſhall appear to the Satisfaction of the ſaid Commiſſioners, or Two Thirds of them at leaſt, that ſuch Tables are conſtructed intirely upon the Principles of Gravitation laid down by Sir *Iſaac Newton* (except with reſpect to thoſe Elements which muſt neceſſarily be taken from aſtronomical Obſervations), and alſo when the Truth of ſuch Tables ſhall have been further confirmed and proved by Compariſon with a Series of aſtronomical Obſervations made during a Period of Eighteen Years and a Half, which is deemed the Period of the Irregularities of the Lunar Motions; which Reward ſhall be due and paid, when the ſaid Commiſſioners, or Two Thirds of them at leaſt, ſhall have declared and determined, that ſuch Tables are ſufficiently exact to ſhew the Diſtance of the Moon from the Sun and Stars in the Heavens, within the Limits above-mentioned; and alſo when the Author or Authors of ſuch improved Solar and Lunar Tables, his or their Executors, Adminiſtrators, or Aſſigns, ſhall have delivered up and aſſigned over to the ſaid Commiſſioners, for the Uſe of the Public, the abſolute Right and Property to and in the ſame, together with the Theory relating thereunto; and in caſe any other Method ſhall be propoſed for finding the Longitude at Sea beſides thoſe before-mentioned, that then and in ſuch Caſe the Firſt Author or Authors, Diſcoverer or Diſcoverers, of

any

any ſuch Method, his or their Executors, Adminiſtrators, or Aſſigns, ſhall be intitled to and have the Reward or Sum of Five thouſand Pounds, if it ſhall determine the ſaid Longitude within One Degree of a great Circle or Sixty geographical Miles; to the Reward or Sum of Seven thouſand Five hundred Pounds, if it ſhall determine the ſame to Two Thirds of that Diſtance; and to the Reward or Sum of Ten thouſand Pounds, if it ſhall determine the ſame to One Half of the ſame Diſtance; which reſpective Rewards ſhall be due and paid, ſo ſoon as the ſaid Commiſſioners, or Two Thirds of them at leaſt, ſhall, after proper Trial have been made by their Appointment and Direction, have determined that ſuch Method ſhall be generally practicable and uſeful for finding the Longitude at Sea within the reſpective Limits above-mentioned.

And be it further Enacted, by the Authority aforeſaid, That when and ſo ſoon as any ſuch Method or Methods, for the Diſcovery of the ſaid Longitude, ſhall be tried, as before-mentioned, and found practicable and uſeful at Sea, and ſufficiently exact to determine the Longitude within any of the Degrees or Limits aforeſaid, the ſaid Commiſſioners, or Two Thirds of them, ſhall certify the ſame, under their Hands and Seals, to the Commiſſioners of the Navy for the Time being, together with the Name or Names of the Perſon or Perſons who ſhall be the Author or Authors of ſuch Method or Methods; and upon the Receipt of ſuch Certificate, the ſaid Commiſſioners of the Navy are hereby authorized and required to make out a Bill or Bills upon the Treaſurer of the Navy for the reſpective Sum or Sums of Money to which the Author or Authors of ſuch Propoſal, his or their Executors, Adminiſtrators, or Aſſigns, ſhall be intitled by virtue of this Act; which Sum or Sums the ſaid Treaſurer is hereby required to pay to the ſaid Author or Authors, their Executors, Adminiſtrators, or Aſſigns accordingly, out of any Money that may be in his Hands unapplied to the Uſe of the Navy, according to the true Intent and Meaning of this Act.

EXTRACT, &c.

And be it further Enacted, by the Authority aforeſaid, That the ſaid Commiſſioners for the Diſcovery of Longitude at Sea, or any Five or more of them, ſhall have full Power and Authority to hear and receive any Propoſal or Propoſals that ſhall be made to them for diſcovering the ſaid Longitude, or for making any other uſeful Improvement in Navigation; and in caſe the ſaid Commiſſioners, or any Five or more of them, ſhall be ſo far ſatisfied of the Probability of any ſuch Diſcovery or Improvement as to think it proper to cauſe Experiments to be made thereof, they ſhall certify the ſame, together with the Names of the Author or Authors of ſuch Propoſal or Propoſals, under their Hands and Seals, to the Commiſſioners of the Navy, who are hereby authorized and required to make out a Bill or Bills upon the Treaſurer of the Navy for any Sum or Sums of Money as the ſaid Commiſſioners for the Diſcovery of Longitude at Sea, or any Five or more of them, ſhall think neceſſary for making ſuch Experiments; which Sum or Sums the Treaſurer of the Navy is hereby required to pay immediately to ſuch Perſon or Perſons as ſhall be appointed by the ſaid Commiſſioners to make thoſe Experiments out of any Money which ſhall be in his the ſaid Treaſurer's Hands unapplied as aforeſaid.

And be it further Enacted, by the Authority aforeſaid, That if any Perſon or Perſons ſhall make any Diſcovery for finding the Longitude at Sea, which, though not of ſo great Uſe as to be intitled to any of the great Rewards above ſpecified, ſhall nevertheleſs be adjudged by the ſaid Commiſſioners for the Diſcovery of Longitude at Sea, or the major Part of them, to be of conſiderable Uſe to the Public, or ſhall make any other Diſcovery or Diſcoveries, Improvement or Improvements, uſeful to Navigation; then, and in ſuch Caſe, ſuch Perſon or Perſons, his or their Executors, Adminiſtrators, or Aſſigns, ſhall, from time to time, have and receive ſuch leſs Reward or Sum or Sums of Money as the ſaid Commiſſioners, or the major Part of them, ſhall think reaſonable; and certify accordingly, under their Hands and Seals, to the Commiſſioners of the Navy, who are hereby authorized and required to make out

out a Bill or Bills upon the Treaſurer of the Navy for any ſuch Sum or Sums of Money, which the ſaid Treaſurer is hereby authorized and required to pay immediately to ſuch Perſon or Perſons, his or their Executors, Adminiſtrators, or Aſſigns, out of any Money that ſhall be in his the ſaid Treaſurer's Hands unapplied as aforeſaid.

Provided alſo, and it is hereby further Enacted, That in caſe any Perſon or Perſons who ſhall and may have received any Sum or Sums of Money, by virtue of this Act, as a Reward for any Method of diſcovering the Longitude at Sea, ſhall afterwards become intitled to any of the greater Rewards appointed by this Act, for or on account of the ſame Method; that then, and in ſuch Caſe, ſuch Sum or Sums of Money as they ſhall or may have received as aforeſaid ſhall be conſidered as Part of ſuch greater Reward, and deducted therefrom accordingly; and that no Perſon ſhall receive more in the Whole for any One Method for diſcovering the Longitude at Sea than the greateſt Reward appointed for ſuch Method by this Act.

By the COMMISSIONERS appointed by Acts of Parliament for the Diſcovery of the Longitude at Sea; and for examining, trying, and judging of all Propoſals, Experiments, and Improvements relating to the ſame.

WHEREAS we have employed proper Perſons to compute Nautical Almanacs and Aſtronomical Ephemerides for the Years 1787, 1788, 1789, 1790, 1791, and 1792, which will greatly contribute to make the Lunar Tables conſtructed by the late Profeſſor MAYER of *Gottingen* (which you have already printed with our Authority) more generally uſeful; and whereas we think fit to employ you to print the ſaid Nautical Almanacs and Aſtronomical Ephemerides: We do therefore, in purſuance of the Power veſted in us by Act of Parliament, hereby licenſe, authorize, and impower you to cauſe the ſame to be printed, together with ſuch other uſeful Tables for facilitating the Method of diſcovering the Longitude at Sea, as ſhall have been conſtructed under our Direction, and will be delivered to you by the Reverend Dr. NEVIL MASKELYNE, his Majeſty's Aſtronomer Royal at *Greenwich*; and for ſo doing this ſhall be your ſufficient Warrant. Given under our Hands and Seals the 13th Day of *February* 1783.

HOWE (L.S.)
C. W. CORNWALL (L.S)
H. DUNDAS (L.S.)
T. FRANKLAND (L.S.)
RODNEY (L.S.)
J. YOUNG (L.S.)
KEPPEL (L.S.)
JOS. BANKS (L.S.)
N. MASKELYNE (L.S.)
J. SMITH (L.S.)
E. WARING (L.S.)
A. SHEPHERD (L.S.)
J. MARRIOTT (L.S.)
T. ORDE (L.S.)
G. ROSE (L.S.)
P. STEPHENS (L.S.)
C. MIDDLETON (L.S.)
J. SMITH (L.S.)

To Mr. WILLIAM
RICHARDSON,
Printer in the *Strand*.

By Command of the Commiſſioners,
H. PARKER, Secretary.

By the Commissioners appointed by Acts of Parliament for the Diſcovery of the Longitude at Sea; and for examining, trying, and judging of all Propoſals, Experiments, and Improvements relating to the ſame.

WHEREAS we think fit to employ you (in the room of Mr. *John Nourſe* deceaſed) to publiſh and vend, and to cauſe to be publiſhed and vended, all ſuch Nautical Almanacs and Aſtronomical Ephemerides, and likewiſe all ſuch other uſeful Tables, conſtructed under our Direction, as have hitherto been printed by Mr. *William Richardſon*, from the Year 1767 to the preſent Time, and alſo ſuch as may henceforward be printed by him, or any other Perſon employed by us for the Purpoſe, for the ſeveral Years next enſuing, down to the Year 1792 incluſive. We do therefore, in purſuance of the Power veſted in us by Act of Parliament, hereby licenſe, authorize, and impower you to publiſh and vend, and to cauſe to be publiſhed and vended, ſuch Nautical Almanacs and Aſtronomical Ephemerides, as well as ſuch other uſeful Tables, conſtructed under our Direction, as have hitherto been printed by Mr. *William Richardſon* from the Year 1767 to the preſent Time, and alſo ſuch as may henceforward be printed by him, or any other Perſon employed by us for the Purpoſe, for the ſeveral Years next enſuing down to the Year 1792 incluſive. For which this ſhall be your Warrant. Given under our Hands and Seals at the Admiralty, the 7th Day of *December* 1782.

Keppel (L.S.)
C. W. Cornwall (L.S.)
T. Frankland (L.S.)
Rodney (L.S.)
J. Young (L.S.)
R. Harland (L.S.)
Howe (L.S.)
Jos. Banks (L.S.)
N. Maskelyne (L.S.)
T. Hornsby (L.S.)
J. Smith (L.S.)
E. Waring (L.S.)
A. Shepherd (L.S.)
J. Marriott (L.S.)
T. Orde (L.S.)
G. Rose (L.S.)
P. Stephens (L.S.)
C. Middleton (L.S.)
J. Smith (L.S.)

To Mr. Peter Elmsly,
Bookſeller in the *Strand*.

By Command of the Commiſſioners,
H. Parker, Secretary.

PREFACE.

THE Commiſſioners of Longitude, in purſuance of the Powers veſted in them by Act of Parliament, preſent the Public with the NAUTICAL ALMANAC and ASTRONOMICAL EPHEMERIS for the Year 1791, being the Twenty-fifth Impreſſion, to be continued annually; a Work which muſt greatly contribute to the Improvement of Aſtronomy, Geography, and Navigation. This EPHEMERIS contains every Thing eſſential to general Uſe that is to be found in any Ephemeris hitherto publiſhed, with many other uſeful and intereſting Particulars never yet offered to the Public in any Work of this Kind. The Tables of the Moon had been brought by the late Profeſſor MAYER of Gottingen to a ſufficient Exactneſs to determine the Longitude at Sea, within a Degree, as appeared by the Trials of ſeveral Perſons who made Uſe of them. The Difficulty and Length of the neceſſary Calculations ſeemed the only Obſtacles to hinder them from becoming of general Uſe: To remove which this EPHEMERIS was made; the Mariner being hereby relieved from the Neceſſity of calculating the Moon's Place from the Tables, and afterwards computing the Diſtance to Seconds by Logarithms, which are the principal and only very delicate Part of the

Calculus; ſo that the finding the Longitude by the Help of the EPHEMERIS is now in a Manner reduced to the Computation of the Time, an Operation equal to that of an Azimuth, and the Correction of the Diſtance on account of Refraction and Parallax, which is alſo rendered very eaſy by either of the Two Methods invented by Mr. LYONS and Mr. DUNTHORNE, and publiſhed in the Firſt Edition of the Tables requiſite to be uſed with the EPHEMERIS, and ſince, with Improvements, in the Second Edition of the ſame Tables; or by either of the Two Methods annexed to the EPHEMERIS of 1772, being both Improvements of the Method which I formerly publiſhed in the BRITISH MARINER'S GUIDE and PHILOSOPHICAL TRANSACTIONS, the Firſt by myſelf, and the Second by Mr. GEORGE WITCHELL, which are now alſo annexed to the Second Edition of the REQUISITE TABLES; but ſtill more ſo by the GENERAL TABLES for correcting the apparent Diſtance of the Moon and a Star or the Sun from the Effects of Refraction and Parallax, computed at great Expence by Order of the Commiſſioners of Longitude, and publiſhed under the Care of Dr. SHEPHERD, Plumian Profeſſor of Aſtronomy and experimental Philoſophy, at CAMBRIDGE, in 1772.

All the Calculations of the EPHEMERIS relating to the Sun were made from Mr. MAYER's laſt Manuſcript Tables, received by the Board of Longitude after his Deceaſe, which have been printed under my Inſpection, and publiſhed in 1770; but the Calculations of the Moon, which had been made from the Year 1777 to the Year 1788, both incluſive, from new Tables, improved from MAYER's Tables, compoſed by Mr. CHARLES MASON, under

my

my Direction, from Calculations made by Order of the Board of Longitude, upon the Series of Lunar Obſervations made by the late Dr. BRADLEY, and publiſhed in the Nautical Almanac of 1774, are in this EPHEMERIS, for the Third time, computed from Tables ſtill farther corrected by Mr. MASON, and rendered more exact by the Addition of Eight Equations to the Number in MAYER's Tables, taken from MAYER's Theory, but ſettled as to the *Maxima* from the ſaid Obſervations, and the Whole being calculated to Tenths of a Second. Theſe new Tables, when compared with the abovementioned Series of Obſervations, a proper Allowance being made for the unavoidable Error of Obſervation, ſeem to give always the Moon's Longitude in the Heavens correctly within 30 Seconds of a Degree; which greateſt Error, added to a poſſible Error of One Minute in taking the Moon's Diſtance from the Sun or a Star at Sea, will at a Medium only produce an Error of 42 Minutes of Longitude. The Error of the ſame Tables in Latitude ſeems never to exceed a Minute, which will but triflingly affect the computed Diſtances of the Moon from the Sun and zodiacal Stars ſet down in the EPHEMERIS.

The Calculations of the Planets Places were made from M. DE LA LANDE's Tables contained in the Second Edition of his Aſtronomy, as they have been for every EPHEMERIS beginning with that of 1780; and thoſe of the Eclipſes of Jupiter's Satellites were made from Mr. WARGENTIN's Tables annexed to the ſame Tables of M. DE LA LANDE, excepting the Eclipſes of Jupiter's Second Satellite, which were inſerted in this EPHEMERIS for the Eleventh time from new Tables tranſmitted to me from their learned Author Mr. Wargentin, Secretary to the Royal Academy of Sciences at Stockholm, and publiſhed at the End of the Nautical Almanac of 1779.

All the Articles of the Ephemeris were computed by Two ſeparate Perſons, and examined by a Third, except the Moon's Longitude, Latitude, Right Aſcenſion, Declination, Semidiameter, and Parallax, which for Noon were computed by One Perſon, and for Midnight by another, and the Truth of theſe Calculations aſcertained by means of Differences, which for the Moon's Longitude were carried as far as the Fourth Order.

NEVIL MASKELYNE,
Astronomer Royal.

Greenwich,
Jan. 10th,
1786.

EXPLANATION of the Characters uſed in the EPHEMERIS.

The PLANETS, &c.

☉	The Sun.	⊖	The Earth.
☾	The Moon.	♂	Mars.
☿	Mercury.	♃	Jupiter
♀	Venus.	♄	Saturn.

☊ The Moon's, or any other Planet's Aſcending Node.
☋ The Deſcending Node.
☌ Conjunction, or Planets ſituated in the ſame Longitude.
☍ Oppoſition, or Planets ſituated in oppoſite Longitudes, or differing 6 Signs from each other.

Signs of the Zodiac.

S.			S.		
0.	♈	Aries.	6.	♎	Libra.
1.	♉	Taurus.	7.	♏	Scorpio.
2.	♊	Gemini.	8.	♐	Sagittarius.
3.	♋	Cancer.	9.	♑	Capricornus.
4.	♌	Leo.	10.	♒	Aquarius.
5.	♍	Virgo.	11.	♓	Piſces.

ECLIPSES for the YEAR 1791.

April 3. ☉ eclipſed, viſible:

H. M.
Beginning — — — — 0. 17
Greateſt Obſcuration — — 1. 45
End — — — — — 3. 9¼

Digits eclipſed 7°. 16′½ on ☉'s North Limb — ☽ makes firſt Impreſſion on the ſolar Diſc at 96° from ☉'s Vertex on the Right Hand.

Apr. 18. ☉ eclipſed, inviſible: H. M.
Beginning — — — — 3. 15½
Greateſt Obſcuration — — 4. 42⅓
End — — — — — 6. 9¼

Digits eclipſed 9°. 24′ on ☽'s South Limb.

Sept. 27. ☉ eclipſed, inviſible:

☌ at 11^{h}. 43′. in Long. 6^{s}. 4°. 46′. ☾'s Lat. 44′⅔ South. ☉ will be centrally eclipſed on the Merid. at 12^{h}. 15′½, in Long. 176°. 7′½ Eaſt, and Lat. 54° South.

Octob. 11. ☉ eclipſed, viſible: H. M.
Beginning — — — — 12. 0
Middle — — — — 13. 35⅔
End — — — — — 15. 11⅓

Digits eclipſed 9°. 17′ on ☽'s North Limb.

OBLIQUITY, &c.

1791.	Obliquity of the Ecliptic. D. M. S.	Equat. of Equin. Points. S.
Jan. 1.	23. 27. 50,2	+ 8,3
April 1.	23. 27. 49,8	+ 6,9
July 1.	23. 27. 49,4	+ 5,5
Octob. 1.	23. 27. 49,0	+ 4,1
Dec. 31.	23. 27. 48,7	+ 2,5

JANUARY 1791.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Sa.	*Circumciſion.*
2	*Su.*	*2d Sunday after Chriſtmas.*
3	M.	
4	Tu.	
5	W.	
6	Th.	*Epiphany.*
7	F.	
8	Sa.	Lucian.
9	*Su.*	*1ſt Sunday after Epiphany.*
10	M.	
11	Tu.	
12	W.	
13	Th.	Hil. Camb. Term begins.
14	F.	Oxf. Term begins.
15	Sa.	
16	*Su.*	*2d Sunday after Epiphany.*
17	M.	
18	Tu.	*Q. Charlotte's Birth-day*
19	W.	[*kept.* Priſca.
20	Th.	Fabian. In 8 d. of S. Hil.
21	F.	Agnes. [1 ret.
22	Sa.	Vincent.
23	*Su.*	*3d Sunday aft. Epiphany.*
24	M.	Hil. Term begins.
25	Tu.	*Converſion of St. Paul.*
26	W.	
27	Th.	*Pr. Au. Fred. born.* In 15
28	F.	[days of S. Hil. 2 ret.
29	Sa.	
30	*Su.*	*4th Sunday aft. Epiphany.*
31	M.	[*K. Ch. I. martyr.*

Phaſes of the Moon.	D. H. M.
New Moon - - -	4. 4. 33
Firſt Quarter -	11. 17. 38
Full Moon - -	19. 17. 48
Laſt Quarter - -	26. 19. 13

Other Phenomena. D. H. M.	
1. 5.59	☾ ν ♏
10. 19.46	☾ δ ♓
11. 2.35	☾ ε ♓
7.16	☾ ζ ♓
15. 6.26	☾ 1 ad δ ♉
6.57	☾ 2 ad δ ♉
9.37	☾ ε ♉
16.	♃ Stationary.
19. 12.19	☉ enters ♒
20. 10.35¾	Im. of 1 ad α ♋ ✱ 7′¼ S. of ☾'s cent.
11.43½	Em. ✱ 6′ S.
12.46	☾ 2 ad α ♋
17.27¾	Im. of κ ♋ ✱ 0′¼ N. of ☾'s cent.
18.25¼	Em. ✱ 1′¾ N.
21. 7.41	☾ ο ♌
16.37	☾ π ♌
23. 13.31	☾ υ ♌
25.	☿ Stationary.
26. 13.29	☾ λ ♍
27. 3.21	☾ α ♎
20.16	☾ 4 ad ζ ♎
28. 4.28	☾ θ ♎
12.35	☾ ν ♏

JANUARY 1791. II.

Days of the Month.	Days of the Week.	Sun's Longitude	Sun's Right Asc. in Time.	Sun's Declin. South.	Equat. of Time. Add.	Diff.
		S. D. M. S.	H. M. S.	D.M.S.	M. S.	S.
1	Sa.	9. 11. 8. 8	18. 48.26,6	22.59.47	4. 8,0	28,3
2	*Su.*	9. 12. 9.20	18. 52.51,5	22.54.27	4. 36,3	27,9
3	M.	9. 13.10.33	18. 57.16,0	22.48.39	5. 4,2	27,5
4	Tu.	9. 14.11.45	19. 1.40,1	22.42.24	5. 31,7	27,0
5	W	9. 15.12.57	19. 6. 3,7	22.35.42	5. 58,7	26,5
6	Th.	9. 16.14. 9	19. 10.26,9	22.28.33	6. 25,2	26,1
7	F.	9. 17.15.20	19. 14.49,6	22.20.57	6. 51,3	25,6
8	Sa.	9. 18.16.31	19. 19.11,8	22.12.55	7. 16,9	25,0
9	*Su.*	9. 19.17.42	19. 23.33,5	22. 4.27	7. 41,9	24,5
10	M.	9. 20.18.52	19. 27.54,6	21.55.33	8. 6,4	23,9
11	Tu.	9. 21.20. 1	19. 32.15,1	21.46.13	8. 30,3	23,2
12	W.	9. 22.21. 9	19. 36.34,9	21.36.28	8. 53,5	22,5
13	Th.	9. 23.22.16	19. 40.54,0	21.26.18	9. 16,0	21,9
14	F.	9. 24.23.23	19. 45.12,5	21.15.44	9. 37,9	21,2
15	Sa.	9. 25.24.28	19. 49.30,3	21. 4.45	9. 59,1	20,5
16	*Su.*	9. 26.25.33	19. 53.47,4	20.53.22	10. 19,6	19,7
17	M.	9. 27.26.37	19. 58. 3,8	20.41.35	10. 39,3	19,0
18	Tu.	9. 28.27.40	20. 2.19,4	20.29.25	10. 58,3	18,2
19	W.	9. 29.28.42	20. 6.34,2	20.16.52	11. 16,5	17,5
20	Th.	10. 0.29.43	20. 10.48,3	20. 3.56	11. 34,0	16,8
21	F.	10. 1.30.43	20. 15. 1,7	19.50.37	11. 50,8	16,0
22	Sa.	10. 2.31.43	20. 19.14,3	19.36.56	12. 6,8	15,2
23	*Su.*	10. 3.32.42	20. 23.26,1	19.22.53	12. 22,0	14,5
24	M.	10. 4.33.40	20. 27.37,1	19. 8.29	12. 36,5	13,7
25	Tu.	10. 5.34.38	20. 31.47,4	18.53.44	12. 50,2	12,9
26	W.	10. 6.35.35	20. 35.56,9	18.38.38	13. 3,1	12,1
27	Th.	10. 7.36.32	20. 40. 5,6	18.23.12	13. 15,2	11,3
28	F.	10. 8.37.28	20. 44.13,5	18. 7.26	13. 26,5	10,5
29	Sa.	10. 9.38.23	20. 48.20,6	17.51.20	13. 37,0	9,7
30	*Su.*	10. 10.39.17	20. 52.26,9	17.34.55	13. 46,7	8,9
31	M.	10. 11.40.11	20. 56.32,4	17.18.12	13. 55,6	

Days	Semidiameter of the Sun. M. S.	Time of D° paſſing the Meridian. M. S.	Hourly Motion of the Sun. M. S.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node. S. D. M.
1	16. 19,2	1. 10,9	2. 32,9	9. 992662	6. 27. 17
7	16. 19,1	1. 10,6	2. 32,8	9. 992727	6. 26. 58
13	16. 18,8	1. 10,1	2. 32,8	9. 992853	6. 26. 38
19	16. 18,3	1. 9,5	2. 32,6	9. 993061	6. 26. 19
25	16. 17,6	1. 8,9	2. 32,4	9. 993373	6. 26. 0

Eclipſes of the SATELLITES of JUPITER.

I. Satellite. Immerſions. Days	H. M. S.	II. Satellite. Immerſions. Days	H. M. S.	III. Satellite. Days	H. M. S.	
1	23. 44. 56	2	22. 44. 24	3	2. 58. 57	I
*3	18. 12. 30	*6	11. 59. 14	3	5. 55. 25	E
*5	12. 40. 6	10	1. 14. 10	10	6. 53. 50	I
7	7. 7. 42	*13	14. 29. 15	10	9. 49. 21	E
9	1. 35. 21	17	3. 44. 31	17	10. 49. 13	I
10	20. 2. 59	*20	16. 59. 55	*17	13. 43. 49	E
*12	14. 30. 41	24	6. 15. 32	*24	14. 45. 16	I
14	8. 58. 26	27	19. 31. 20	*24	17. 38. 54	E
16	3. 26. 15	31	8. 47. 19	31	18. 42. 0	I
17	21. 54. 2			31	21. 34. 41	E
*19	16. 21. 53			IV. Satellite.		
*21	10. 49. 46					
23	5. 17. 43					
24	23. 45. 42			4	19. 18. 58	I
*26	18. 13. 43			4	22. 54. 28	E
*28	12. 41. 48			*21	13. 9. 44	I
30	7. 9. 56			*21	16. 39. 15	E

JANUARY 1791. IV

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
			MERCURY. Gr. Elong. 19^d.			
1	10. 18. 10	7. 0 S	9. 21. 42	2. 8 S	23. 50 S	0. 48
4	10. 29. 32	6. 48	9. 26. 36	2. 4	22. 53	0. 55
7	11. 11. 53	6. 18	10. 1. 28	1. 54	21. 43	1. 2
10	11. 25. 25	5. 25	10. 6. 12	1. 38	20. 20	1. 8
13	0. 10. 14	4. 5	10. 10. 41	1. 15	18. 47	1. 13
16	0. 26. 25	2. 20	10. 14. 44	0. 44	17. 8	1. 16
19	1. 13. 53	0. 15 S	10. 18. 5	0. 5 S	15. 30	1. 16
22	2. 2. 20	2. 0 N	10. 20. 23	0. 42 N	14. 3	1. 11
25	2. 21. 14	4. 4	10. 21. 15	1. 34	12. 57	1. 1
28	3. 10. 0	5. 41	10. 20. 28	2. 26	12. 22	0. 44
31	3. 27. 57	6. 40	10. 18. 6	3. 10	12. 25	0. 22
			VENUS. Sup. ☌ 1^d. 15^h.			
1	9. 10. 46	1. 29 S	9. 10. 59	0. 38 S	23. 39 S	☌
7	9. 20. 15	1. 58	9. 18. 32	0. 50	23. 1	0. 6
13	9. 29. 44	2. 24	9. 26. 5	1. 1	21. 58	0. 12
19	10. 9. 13	2. 45	10. 3. 37	1. 11	20. 31	0. 18
25	10. 18. 42	3. 3	10. 11. 9	1. 18	18. 42	0. 24
			MARS.			
1	10. 6. 3	1. 49 S	9. 25. 46	1. 5 S	22. 5 S	1. 3
7	10. 9. 48	1. 50	10. 0. 29	1. 6	21. 8	0. 57
13	10. 13. 34	1. 51	10. 5. 12	1. 6	20. 3	0. 50
19	10. 17. 21	1. 51	10. 9. 56	1. 6	18. 50	0. 44
25	10. 21. 9	1. 51	10. 14. 41	1. 5	17. 29	0. 38
			JUPITER.			
1	5. 21. 0	1. 15 N	6. 1. 16	1. 19 N	0. 42 N	17. 15
7	5. 21. 27	1. 16	6. 1. 29	1. 21	0. 39	16. 50
13	5. 21. 54	1. 16	6. 1. 35	1. 22	0. 37	16. 24
19	5. 22. 22	1. 16	6. 1. 34	1. 24	0. 40	15. 59
25	5. 22. 49	1. 16	6. 1. 26	1. 26	0. 44	15. 33
			SATURN.			
1	0. 5. 51	2. 25 S	0. 0. 0	2. 22 S	2. 11 S	5. 14
7	0. 6. 3	2. 25	0. 0. 21	2. 21	2. 1	4. 49
13	0. 6. 15	2. 25	0. 0. 45	2. 20	1. 50	4. 25
19	0. 6. 28	2. 25	0. 1. 12	2. 19	1. 39	4. 1
25	0. 6. 40	2. 25	0. 1. 42	2. 18	1. 26	3. 37

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D.M.S.	D. M. S.
1	Sa.	7. 28. 6.23	8. 5.23.10	2.30.52 N	3. 2. 57 N
2	*Su.*	8. 12.40.39	8. 19.58. 0	3.32. 2	3. 57. 38
3	M.	8. 27.14.25	9. 4.28.57	4.19.15	4. 36. 34
4	Tu.	9. 11.40.49	9. 18.49. 3	4.49.22	4. 57. 29
5	W.	9. 25.52.54	10. 2.51.43	5. 0.57	4. 59. 51
6	Th.	10. 9.44.59	10. 16.32.20	4.54.21	4. 44. 44
7	F.	10. 23.13.29	10. 29.48.26	4.31.19	4. 14. 27
8	Sa.	11. 6.17.14	11. 12.40. 5	3.54.30	3. 31. 53
9	*Su.*	11. 18.57.22	11. 25. 9.29	3. 6.58	2. 40. 8
10	M.	0. 1.17. 0	0. 7.20.31	2.11.45	1. 42. 8
11	Tu.	0. 13.20.38	0. 19.18. 5	1.11.38	0. 40. 35 N
12	W.	0. 25.13.32	1. 1. 7.43	0. 9.14 N	0. 22. 5 S
13	Th.	1. 7. 1.19	1. 12.55. 5	0.53. 6 S	1. 23. 32
14	F.	1. 18.49.36	1. 24.45.36	1.53. 8	2. 21. 35
15	Sa.	2. 0.43.37	2. 6.44.15	2.48.37	3. 13. 56
16	*Su.*	2. 12.47.52	2. 18.55. 0	3.37.14	3. 58. 14
17	M.	2. 25. 5.55	3. 1.20.52	4.16.38	4. 32. 9
18	Tu.	3. 7.40. 2	3. 14. 3.27	4.44.28	4. 53. 23
19	W.	3. 20.31. 6	3. 27. 2.54	4.58.37	5. 0. 1
20	Th.	4. 3.38.40	4. 10.18. 8	4.57.26	4. 50. 47
21	F.	4. 17. 1. 2	4. 23.47. 1	4.40. 3	4. 25. 17
22	Sa.	5. 0.35.44	5. 7.26.53	4. 6.38	3. 44. 17
23	*Su.*	5. 14.20. 3	5. 21.15. 2	3.18.32	2. 49. 43
24	M.	5. 28.11.30	6. 5. 9.13	2.18.14	1. 44. 34
25	Tu.	6. 12. 8. 7	6. 19. 7.56	1. 9.11 S	0. 32. 38 S
26	W.	6. 26. 8.41	7. 3.10.12	0. 4.29 N	0. 41. 38 N
27	Th.	7. 10.12.31	7. 17.15.30	1.18.13	1. 53. 39
28	F.	7. 24.19. 4	8. 1.23. 5	2.27.22	2. 58. 51
29	Sa.	8. 8.27.22	8. 15.31.40	3.27.34	3. 53. 7
30	*Su.*	8. 22.35.40	8. 29.38.56	4.14.59	4. 32. 57
31	M.	9. 6.41. 4	9. 13.41.31	4.46.40	4. 56. 2

JANUARY 1791.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid.	☽'s Right Aſcenſ. at Noon.	☽'s Right Aſcenſ. at Midn.	☽'s Declination at Noon	☽'s Declination at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	Sa.	28	21. 48	236. 26	244. 2	17. 18 S	18. 13 S
2	*Su.*	29	22. 47	251. 42	259.24	18. 50	19. 8
3	M.	30	23. 46	267. 5	274.43	19. 7	18. 47
4	Tu.	1	☌	282. 15	289.39	18. 9	17. 14
5	W.	2	0. 43	296. 54	303.58	16. 4	14. 40
6	Th.	3	1. 36	310. 51	317.33	13. 6	11. 22
7	F.	4	2. 26	324. 4	330.25	9. 31	7. 35
8	Sa.	5	3. 13	336. 37	342.41	5. 35	3. 33 S
9	*Su.*	6	3. 58	348. 38	354.30	1. 30 S	0. 32 N
10	M.	7	4. 42	0. 18	6. 4	2. 32 N	4. 29
11	Tu.	8	5. 25	11. 48	17.33	6. 22	8. 11
12	W.	9	6. 8	23. 19	29. 7	9. 55	11. 32
13	Th.	10	6. 52	34. 58	40.54	13. 2	14. 24
14	F.	11	7. 37	46. 54	53. 0	15. 37	16. 41
15	Sa.	12	8. 24	59. 11	65.28	17. 34	18. 16
16	*Su.*	13	9. 12	71. 50	78.18	18. 46	19. 3
17	M.	14	10. 2	84. 49	91.25	19. 6	18. 55
18	Tu.	15	10. 52	98. 4	104.44	18. 31	17. 52
19	W.	16	11. 43	111. 25	118. 6	16. 59	15. 52
20	Th.	17	12. 34	124. 46	131.25	14. 32	13. 0
21	F.	18	13. 24	138. 2	144.38	11. 18	9. 26
22	Sa.	19	14. 14	151. 12	157.45	7. 26	5. 19
23	*Su.*	20	15. 4	164. 18	170.51	3. 7 N	0. 52 N
24	M.	21	15. 55	177. 25	184. 2	1. 24 S	3. 39 S
25	Tu.	22	16. 46	190. 42	197.27	5. 52	8. 0
26	W.	23	17. 39	204. 16	211.11	10. 2	11. 56
27	Th	24	18. 34	218. 13	225.21	13. 40	15. 11
28	F.	25	19. 31	232. 34	239.54	16. 29	17. 32
29	Sa.	26	20. 28	247. 17	254.44	18. 19	18. 49
30	*Su.*	27	21. 25	262. 12	269.38	19. 1	18. 55
31	M.	28	22. 22	277. 2	284. 21	18. 31	17. 51

JANUARY 1791.

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	Sa.	16. 23	16. 23	60. 8	60. 9	4761	4760
2	*Su.*	16. 23	16. 22	60. 7	60. 2	4763	4769
3	M.	16. 19	16. 16	59. 53	59. 41	4779	4794
4	Tu.	16. 12	16. 7	59. 27	59. 10	4811	4832
5	W.	16. 2	15. 56	58. 51	58. 30	4855	4881
6	Th.	15. 50	15. 44	58. 7	57. 43	4910	4940
7	F.	15. 37	15. 31	57. 19	56. 55	4970	5000
8	Sa.	15. 24	15. 18	56. 31	56. 9	5031	5059
9	*Su.*	15. 12	15. 7	55. 48	55. 29	5086	5111
10	M.	15. 2	14. 58	55. 12	54. 57	5133	5153
11	Tu.	14. 55	14. 52	54. 45	54. 35	5169	5182
12	W.	14. 51	14. 49	54. 28	54. 23	5191	5198
13	Th.	14. 49	14. 49	54. 21	54. 22	5201	5199
14	F.	14. 50	14. 51	54. 25	54. 30	5195	5189
15	Sa.	14. 53	14. 56	54. 38	54. 48	5178	5165
16	*Su.*	14. 59	15. 3	54. 59	55. 12	5150	5133
17	M.	15. 7	15. 11	55. 27	55. 43	5114	5093
18	Tu.	15. 15	15. 20	55. 59	56. 16	5072	5050
19	W.	15. 25	15. 29	56. 33	56. 50	5028	5006
20	Th.	15. 34	15. 38	57. 7	57. 24	4985	4964
21	F.	15. 43	15. 47	57. 40	57. 54	4943	4926
22	Sa.	15. 51	15. 54	58. 8	58. 21	4908	4892
23	*Su.*	15. 57	16. 0	58. 32	58. 42	4878	4866
24	M.	16. 2	16. 4	58. 51	58. 58	4855	4846
25	Tu.	16. 6	16. 7	59. 5	59. 10	4838	4832
26	W.	16. 8	16. 10	59. 14	59. 18	4827	4822
27	Th.	16. 10	16. 11	59. 21	59. 22	4819	4817
28	F.	16. 11	16. 10	59. 22	59. 21	4817	4819
29	Sa.	16. 10	16. 9	59. 19	59. 15	4821	4826
30	*Su.*	16. 7	16. 5	59. 10	59. 3	4832	4841
31	M.	16. 3	16. 0	58. 54	58. 44	4852	4864

Diſtances of ☽'s Center from Sun, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	The Sun.	43. 5. 17	41. 24. 32	39. 43. 48					
5	α Arietis.					90. 59. 4	89. 17. 19	87. 35. 56	85. 54. 55
6		84. 14. 15	82. 33. 57	80. 54. 2	79. 14. 30	77. 35. 20	75. 56. 33	74. 18. 10	72. 40. 11
7		71. 2. 36	69. 25. 25	67. 48. 38	66. 12. 15	64. 36. 16	63. 0. 42	61. 25. 33	59. 50. 50
8		58. 16. 32	56. 42. 39	55. 9. 12	53. 36. 10	52. 3. 34	50. 31. 24	48. 59. 40	47. 28. 22
9		45. 57. 30							
9	Aldebaran.	78. 17. 53	76. 44. 22	75. 11. 9	73. 38. 14	72. 5. 35	70. 33. 12	69. 1. 5	67. 29. 13
10		65. 57. 37	64. 26. 15	62. 55. 6	61. 24. 10	59. 53. 28	58. 22. 58	56. 52. 39	55. 22. 31
11		53. 52. 34	52. 22. 47	50. 53. 8	49. 23. 38	47. 54. 16	46. 25. 2	44. 55. 54	43. 26. 53
12		41. 57. 58	40. 29. 9	39. 0. 25	37. 31. 44	36. 3. 7	34. 34. 33	33. 6. 1	31. 37. 32
13		30. 9. 5	28. 40. 39	27. 12. 13	25. 43. 48	24. 15. 24	22. 47. 1	21. 18. 38	19. 50. 15
14		18. 21. 52							
14	Pollux.	61. 59. 48	60. 33. 8	59. 6. 27	57. 39. 44	56. 13. 0	54. 46. 15	53. 19. 29	51. 52. 43
15		50. 25. 56	48. 59. 8	47. 32. 21	46. 5. 35	44. 38. 50	43. 12. 8	41. 45. 29	40. 18. 53
16		38. 52. 21							
16	Regulus.	74. 12. 3	72. 40. 59	71. 9. 43	69. 38. 14	68. 6. 33	66. 34. 39	65. 2. 33	63. 30. 14
17		61. 57. 42	60. 24. 56	58. 51. 57	57. 18. 45	55. 45. 19	54. 11. 39	52. 37. 45	51. 3. 38
18		49. 29. 17	47. 54. 43	46. 19. 55	44. 44. 54	43. 9. 40	41. 34. 13	39. 58. 34	38. 22. 44

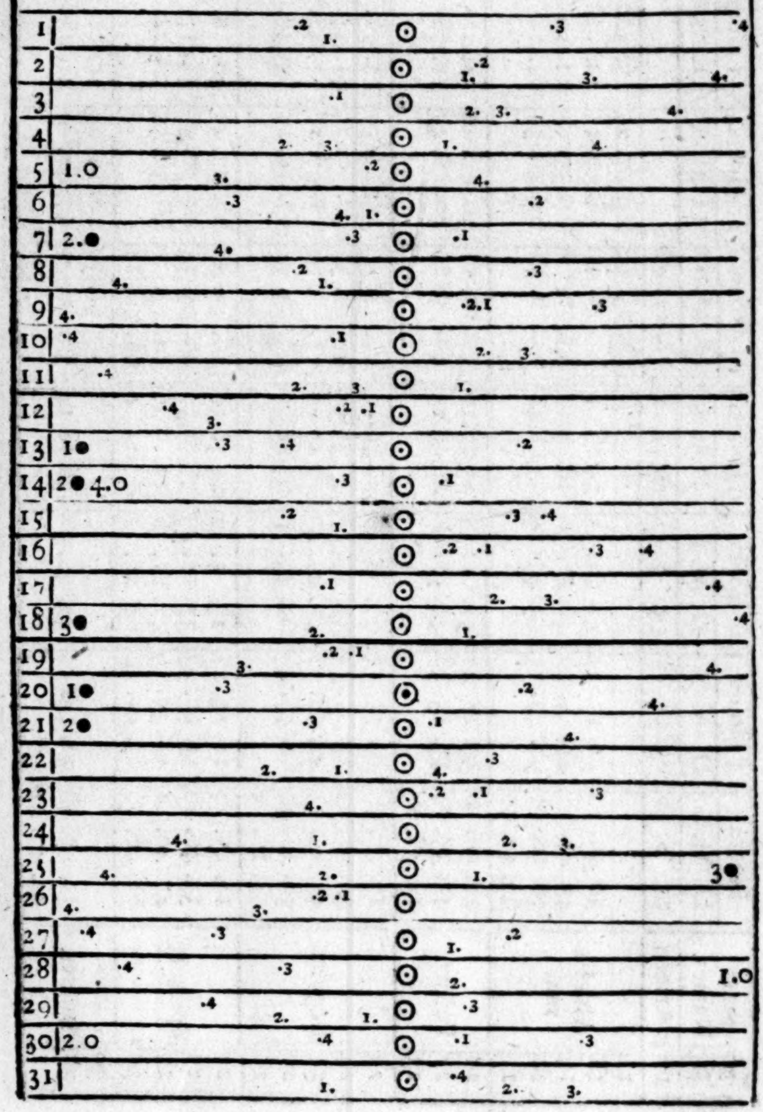
Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
19	Regulus.	36. 46. 41	35. 10. 26	33. 34. 2	31.57.29	30. 20. 48	28. 44. 1	27. 7. 8	25.30.11
20		23. 53. 10							
20	Spica ♍	77. 9. 47	75. 30. 39	73. 51. 17	72.11.42	70. 31. 53	68. 51. 50	67. 11. 35	65.31. 7
21		63. 50. 25	62. 9. 31	60. 28. 26	58.47. 9	57. 5. 40	55. 24. 0	53. 42. 9	52. 0. 7
22		50. 17. 54	48. 35. 31	46. 52. 59	45.10.17	43. 27. 26	41. 44. 26	40. 1. 18	38.18. 2
23		36. 34. 38	34. 51. 6	33. 7. 28	31.23.43	29. 39. 51	27. 55. 53	26. 11. 50	24.27.42
24		22. 43. 29							
24	Antares.	68. 32. 50	66. 49. 27	65. 5. 59	63.22.27	61. 38. 51	59. 55. 12	58. 11. 32	56.27.50
25		54. 44. 7	53. 0. 24	51. 16. 41	49.32.59	47. 49. 19	46. 5. 41	44. 22. 6	42.38.36
26		40. 55. 12	39. 11. 54	37. 28. 44	35.45.46	34. 3. 1	32. 20. 32	30. 38. 21	28.56.30
27		27. 15. 0							
24	The Sun.					119. 54. 1	118. 17. 12	116. 40. 18	115. 3.18
25		113. 26. 13	111. 49. 3	110. 11. 49	108.34.30	106. 57. 7	105. 19. 40	103. 42. 9	102. 4.34
26		100. 26. 55	98. 49. 13	97. 11. 28	95.33.40	93. 55. 50	92. 17. 57	90. 40. 1	89. 2. 3
27		87. 24. 4	85. 46. 3	84. 8. 0	82.29.55	80. 51. 49	79. 13. 42	77. 35. 34	75.57.26
28		74. 19. 17	72. 41. 8	71. 2. 59	69.24.51	67. 46. 44	66. 8. 38	64. 30. 33	62.52.29
29		61. 14. 27	59. 36. 27	57. 58. 30	56.20.37	54. 42. 47	53. 5. 0	51. 27. 17	49.49.39
30		48. 12. 6	46. 34. 39	44. 57. 19	43.20. 6	41. 43. 0	40. 6. 2	38. 29. 14	

Diſtances of ☽'s Center from Sun, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D.M.S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Spica ♍	37.26.43	39.15.54	41. 5.10	42.54.29	44.43.51	46.33.13	48.22.36	50.11.59
2		52. 1.21	53.50.41	55.39.57	57.29.10	59.18.19	61. 7.23	62.56.21	64.45.13
3		66.33.58							
7	The Sun.			39.13.31	40.43.23	42.12.55	43.42. 8	45.11. 2	46.39.37
8		48. 7.53	49.35.49	51. 3.26	52.30.44	53.57.44	55.24.25	56.50.48	58.16.53
9		59.42.39	61. 8. 8	62.33.20	63.58.15	65.22.54	66.47.17	68.11.26	69.35.20
10		70.59. 0	72.22.26	73.45.38	75. 8.39	76.31.27	77.54. 3	79.16.27	80.38.41
11		82. 0.44	83.22.38	84.44.24	86. 6. 2	87.27.31	88.48.53	90.10. 9	91.31.19
12		92.52.23	94.13.23	95.34.19	96.55.11	98.16. 0	99.36.47	100.57.32	102.18.15
13		103.38.57	104.59.39	106.20.23	107.41. 8	109. 1.54	110.22.42	111.43.32	113. 4.25
14		114.25.22	115.46.23	117. 7.30	118.28.43	119.50. 1	121.11.24		
11	Fomal-haut.					52. 1.57	53.17.20	54.33. 5	55.49.12
12		57. 5.40	58.22.28	59.39.34	60.56.56	62.14.35	63.32.29	64.50.37	66. 8.58
13		67.27.32	68.46.18	70. 5.16	71.24.26	72.43.49			
13	α Pegaſi.					55.23.27	56.46.58	58.10.43	59.34.41
14		60.58.51	62.23.14	63.47.50	65.12.38	66.37.38	68. 2.50	69.28.14	70.53.50
15		72.19.38	73.45.39	75.11.52	76.38.17	78. 4.56			
15	α Arietis.					34.29.16	35.55.12	37.21.35	38.48.26
16		40.15.44	41.43.28	43.11.36	44.40. 8	46. 9. 3	47.38.19	49. 7.57	50.37.56

Days.	Stars Names.	Noon. D. M. S.	3 Hours. D. M. S.	6 Hours. D. M. S.	9 Hours. D.M.S.	12 Hours. D. M. S.	15 Hours. D. M. S.	18 Hours. D. M. S.	21 Hours. D. M. S.
17	α Arietis.	52. 8. 16	53. 38. 55	55. 9. 53	56.41.11	58. 12. 48			
17	Aldebaran.					24. 23. 43	25. 57. 29	27. 31. 33	29. 5.53
18		30. 40. 30	32. 15. 24	33. 50. 34	35.26. 1	37. 1. 44	38. 37. 43	40. 13. 58	41.50.29
19		43. 27. 17	45. 4. 20	46. 41. 38	48.19.12	49. 57. 2	51. 35. 7	53. 13. 27	54.52. 2
20		56. 30. 51	58. 9. 55	59. 49. 13	61.28.46	63. 8. 32	64. 48. 32	66. 28. 45	68. 9 11
21		69. 49. 50							
21	Pollux.	28. 56. 8	30. 28. 27	32. 1. 34	33.35.30	35. 10. 18	36. 45. 49	38. 21. 53	39.58.35
22		41. 35. 54	43. 13. 38	44. 51. 48	46.30.23	48. 9. 22	49. 48. 43	51. 28. 21	53. 8.16
23		54. 48. 27							
23	Regulus.	17. 47. 38	19. 27. 54	21. 8. 40	22.49.55	24. 31. 40	26. 13. 50	27. 56. 19	29.39. 9
24		31. 22. 15	33. 5. 33	34. 49. 2	36.32.44	38. 16. 37	40. 0. 39	41. 44. 49	43.29. 8
25		45. 13. 34	46. 58. 7	48. 42. 46	50.27.31	52. 12. 22	53. 57. 18	55. 42. 19	57.27.25
26		59. 12. 35	60. 57. 49	62. 43. 6	64.28.27	66. 13. 52	67. 59. 20	69. 44. 51	71.30.25
27		73. 16. 2							
27	Spica ♍	19. 33. 39	21. 19. 21	23. 5. 7	24.50.56	26. 36. 48	28. 22. 43	30. 8. 40	31.54.39
28		33. 40. 40	35. 26. 43	37. 12. 46	38.58.50	40. 44. 54	42. 30. 59	44. 17. 3	46. 3. 6
29		47. 49. 8	49. 35. 9	51. 21. 8	53. 7. 6	54. 53. 2	56. 38. 55	58. 24. 45	60.10.32
30		61. 56. 16	63. 41. 56	65. 27. 31	67.13. 2	68. 58. 28			
30	Antares.					24. 31. 30	26. 11. 29	27. 51. 49	29.32.31
31		31. 13. 38	32. 54. 59	34. 36. 31	36.18.14	38. 0. 7	39. 42. 4	41. 23. 58	43. 5.51
F. 1		44. 47. 42							

Configurations of the SATELLITES of JUPITER at Five o'Clock in the Morning.



I. FEBRUARY 1791.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Tu.	
2	W.	*Purif. of B. V. Mary.*
3	Th.	Blas. On mor. of Purif.
4	F.	[3 ret.
5	Sa.	Agatha.
6	*Su.*	*5th Sunday after Epiphany.*
7	M.	
8	Tu.	
9	W.	In 8 days of Purif. 4 ret.
10	Th.	
11	F.	
12	Sa.	Hilary Term ends.
13	*Su.*	*6th Sunday after Epiphany.*
14	M.	Valentine.
15	Tu.	
16	W.	
17	Th.	
18	F.	
19	Sa.	
20	*Su.*	*Septuagesima-Sunday.*
21	M.	
22	Tu.	
23	W.	
24	Th.	*St. Matthias.* *Pr. Adol.*
25	F.	[*Fred. born.*
26	Sa.	
27	*Su.*	*Sexageſ. Sun.* Cam. Term.
28	M.	[div. n.

Phaſes of the Moon.

	D. H. M.
New Moon —	2. 17. 39
Firſt Quarter —	10. 15. 30
Full Moon — —	18. 7. 36
Laſt Quarter —	25. 2. 57

Other Phenomena.

D. H. M.	
1.	♀ ♂ diff. Lat. [19′.
7. 4.16	☾ ☌ ♓
11. 0	☾ ε ♓
15.39	☾ ζ ♓
11.14.45	☾ 1 ad ☌ ♉
15.16	☾ 2 ad ☌ ♉
17.57	☾ ε ♉
15.	☿ Stationary.
16.20.39	☾ 1 ad α ♋
21.37	☾ 2 ad α ♋
17. 2. 6	☾ κ ♋
16.17	☾ ο ♌
18. 1. 5	☾ π ♌
3. 9	☉ enters ♓
19.20.55	☾ υ ♌
22.19.10	☾ λ ♍
23. 8.50	☾ α ♎
24. 1.37	☾ 4 ad ζ ♎
9.49	☾ θ ♎

FEBRUARY 1791. II.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Aſc. in Time.	Sun's Declin. South.	Equat. of Time. Add.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	Tu.	10. 12.41. 3	21. 0.37,0	17. 1.10	14. 3,7	
2	W.	10. 13.41.54	21. 4.40,8	16.43.50	14.11,0	7,3
3	Th.	10. 14.42.44	21. 8.43,8	16.26.13	14.17,4	6,4
4	F.	10. 15.43.33	21. 12.46,0	16. 8.19	14.23,0	5,6
5	Sa.	10. 16.44.21	21. 16.47,4	15.50. 8	14.27,8	4,8
6	*Su.*	10. 17.45. 7	21. 20.48,0	15.31.40	14.31,8	4,0
7	M.	10. 18.45.52	21. 24.47,8	15.12.57	14.35,0	3,2
8	Tu.	10. 19.46.35	21. 28.46,7	14.53.59	14.37,4	2,4
9	W.	10. 20.47.16	21. 32.44,8	14.34.46	14.38,9	1,5
10	Th.	10. 21.47.55	21. 36.42,0	14.15.18	14.39,6	0,7
11	F.	10. 22.48.32	21. 40.38,5	13.55.37	14.39,5	0,1
12	Sa.	10. 23.49. 8	21. 44.34,1	13.35.42	14.38,6	0,9
13	*Su.*	10. 24.49.42	21. 48.29,0	13.15.34	14.36,9	1,7
14	M.	10. 25.50.14	21. 52.23,1	12.55.13	14.34,5	2,4
15	Tu.	10. 26.50.44	21. 56.16,4	12.34.39	14.31,3	3,2
16	W.	10. 27.51.12	22. 0. 9,0	12.13.53	14.27,3	4,0
17	Th.	10. 28.51.39	22. 4. 1,0	11.52.56	14.22,6	4,7
18	F.	10. 29.52. 4	22. 7.52,2	11.31.48	14.17,3	5,3
19	Sa.	11. 0.52.27	22. 11.42,7	11.10.29	14.11,3	6,0
20	*Su.*	11. 1.52.49	22. 15.32,6	10.49. 0	14. 4,7	6,6
21	M.	11. 2.53. 9	22. 19.21,8	10.27.20	13.57,4	7,3
22	Tu.	11. 3.53.27	22. 23.10,3	10. 5.31	13.49,4	8,0
23	W.	11. 4.53.44	22. 26.58,2	9.43.33	13.40,8	8,6
24	Th.	11. 5.54. 0	22. 30.45,6	9.21.25	13.31,6	9,2
25	F.	11. 6.54.14	22. 34.32,4	8.59. 9	13.21,9	9,7
26	Sa.	11. 7.54.27	22. 38.18,6	8.36.45	13.11,6	10,3
27	*Su.*	11. 8.54.39	22. 42. 4,3	8.14.14	13. 0,8	10,8
28	M.	11. 9.54.49	22. 45.49,6	7.51.35	12.49,5	11,3

Days of the Month.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	16. 16,5	1. 8,1	2. 32,2	9,993834	6. 25. 38
7	16. 15,6	1. 7,4	2. 31,8	9,994285	6. 25. 19
13	16. 14,4	1. 6,7	2. 31,5	9,994776	6. 25. 0
19	16. 13,1	1. 6,1	2. 31,0	9,995338	6. 24. 41
25	16. 11,7	1. 5,6	2. 30,5	9,995971	6. 24. 22

Eclipſes of the SATELLITES of JUPITER.

I. Satellite. Immerſions.

Days	H. M. S.
1	1. 38. 5
2	20. 6. 17
*4	14. 34. 31
6	9. 2. 49
8	3. 31. 10
9	21. 59. 34
*11	16. 28. 0
*13	10. 56. 29
15	5. 25. 1
16	23. 53. 36
18	18. 22. 14
*20	12. 50. 52
22	7. 19. 32
24	1. 48. 17
25	20. 17. 3
*27	14. 45. 51

II. Satellite. Immerſions.

Days	H. M. S.
3	22. 3. 30
*7	11. 19. 54
11	0. 36. 35
*14	13. 53. 29
18	3. 10. 35
*21	16. 27. 52
25	5. 45. 21
28	19. 3. 3

III. Satellite.

Days	H. M. S.
7	22. 39. 30 I
8	1. 31. 15 E
15	2. 37. 47 I
15	5. 28. 34 E
22	6. 36. 46 I
*22	9. 26. 35 E

IV. Satellite.

7	7. 4. 8 I
*7	10. 27. 28 E
24	1. 2. 50 I
24	4. 19. 52 E

FEBRUARY 1791.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
			MERCURY. Inf. ☌ 3^d. 0^h.			
1	4. 3. 40	6. 51 N	10. 17. 3	3. 20 N	12. 34 S	0. 13
4	4. 19. 56	6. 59	10. 13. 32	3. 40	13. 16	23. 38
7	5. 4. 45	6. 38	10. 10. 7	3. 38	14. 14	23. 13
10	5. 18. 12	5. 55	10. 7. 30	3. 18	15. 13	22. 53
13	6. 0. 25	5. 0	10. 6. 3	2. 46	16. 5	22. 37
16	6. 11. 36	3. 57	10. 5. 44	2. 9	16. 46	22. 27
19	6. 21. 57	2. 51	10. 6. 24	1. 31	17. 13	22. 20
22	7. 1. 37	1. 44	10. 7. 55	0. 54	17. 26	22. 16
25	7. 10. 45	0. 38 N	10. 10. 4	0. 19 N	17. 26	22. 15
28	7. 19. 31	0. 27 S	10. 12. 45	0. 13 S	17. 13	22. 15
			VENUS.			
1	10. 29. 47	3. 16 S	10. 19. 56	1. 24 S	16. 11 S	0. 31
7	11. 9. 18	3. 22	10. 27. 27	1. 27	13. 44	0. 36
13	11. 18. 49	3. 23	11. 4. 58	1. 28	11. 4	0. 41
19	11. 28. 20	3. 18	11. 12. 27	1. 26	8. 13	0. 46
25	0. 7. 53	3. 7	11. 19. 56	1. 22	5. 15	0. 51
			MARS.			
1	10. 25. 35	1. 50 S	10. 20. 13	1. 5 S	15. 47 S	0. 31
7	10. 29. 23	1. 49	10. 24. 58	1. 4	14. 13	0. 26
13	11. 3. 12	1. 47	10. 29. 42	1. 3	12. 34	0. 20
19	11. 7. 0	1. 45	11. 4. 27	1. 1	10. 51	0. 15
25	11. 10. 49	1. 42	11. 9. 11	1. 0	9. 4	0. 10
			JUPITER.			
1	5. 23. 21	1. 16 N	6. 1. 9	1. 28 N	0. 53 N	15. 3
7	5. 23. 49	1. 16	6. 0. 47	1. 29	1. 3	14. 38
13	5. 24. 16	1. 17	6. 0. 19	1. 30	1. 15	14. 13
19	5. 24. 43	1. 17	5. 29. 46	1. 32	1. 30	13. 48
25	5. 25. 11	1. 17	5. 29. 8	1. 33	1. 46	13. 22
			SATURN.			
1	0. 6. 54	2. 25 S	0. 2. 20	2. 16 S	1. 9 S	3. 11
7	0. 7. 6	2. 25	0. 2. 56	2. 16	0. 54	2. 49
13	0. 7. 19	2. 26	0. 3. 34	2. 15	0. 39	2. 28
19	0. 7. 31	2. 26	0. 4. 13	2. 14	0. 23	2. 7
25	0. 7. 43	2. 26	0. 4. 54	2. 13	0. 6	1. 47

FEBRUARY 1791.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	Tu.	9. 20. 39. 47	9. 27. 35. 19	5. 0. 55 N	5. 1. 19 N
2	W.	10. 4. 27. 34	10. 11. 16. 5	4. 57. 18	4. 49. 8
3	Th.	10. 18. 0. 25	10. 24. 40. 15	4. 36. 56	4. 21. 5
4	F.	11. 1. 15. 16	11. 7. 45. 22	4. 1. 52	3. 39. 43
5	Sa.	11. 14. 10. 31	11. 20. 30. 49	3. 14. 59	2. 48. 7
6	*Su.*	11. 26. 46. 21	0. 2. 57. 27	2. 19. 27	1. 49. 26
7	M.	0. 9. 4. 28	0. 15. 7. 51	1. 18. 26	0. 46. 48 N
8	Tu.	0. 21. 8. 6	0. 27. 5. 49	0. 14. 52 N	0. 17. 1 S
9	W.	1. 3. 1. 36	1. 8. 56. 6	0. 48. 36 S	1. 19. 32
10	Th.	1. 14. 49. 59	1. 20. 43. 59	1. 49. 35	2. 18. 28
11	F.	1. 26. 38. 43	2. 2. 34. 58	2. 45. 55	3. 11. 42
12	Sa.	2. 8. 33. 19	2. 14. 34. 27	3. 35. 31	3. 57. 8
13	*Su.*	2. 20. 38. 57	2. 26. 47. 20	4. 16. 16	4. 32. 39
14	M.	3. 3. 0. 7	3. 9. 17. 40	4. 46. 1	4. 56. 6
15	Tu.	3. 15. 40. 19	3. 22. 8. 13	5. 2. 40	5. 5. 27
16	W.	3. 28. 41. 35	4. 5. 20. 17	5. 4. 18	4. 59. 1
17	Th.	4. 12. 4. 15	4. 18. 53. 12	4. 49. 34	4. 35. 53
18	F.	4. 25. 46. 46	5. 2. 44. 31	4. 18. 1	3. 56. 8
19	Sa.	5. 9. 45. 52	5. 16. 50. 18	3. 30. 28	3. 1. 21
20	*Su.*	5. 23. 57. 6	6. 1. 5. 43	2. 29. 12	1. 54. 32
21	M.	6. 8. 15. 27	6. 15. 25. 45	1. 17. 55	0. 39. 57 S
22	Tu.	6. 22. 36. 8	6. 29. 46. 3	0. 1. 20 S	0. 37. 20 N
23	W.	7. 6. 55. 13	7. 14. 3. 11	1. 15. 21 N	1. 52. 7
24	Th.	7. 21. 9. 49	7. 28. 14. 48	2. 27. 1	2. 59. 32
25	F.	8. 5. 18. 4	8. 12. 19. 24	3. 29. 10	3. 55. 29
26	Sa.	8. 19. 18. 44	8. 26. 15. 56	4. 18. 10	4. 36. 54
27	*Su.*	9. 3. 10. 55	9. 10. 3. 31	4. 51. 30	5. 1. 47
28	M.	9. 16. 53. 42	9. 23. 41. 11	5. 7. 43	5. 9. 15

FEBRUARY 1791. VI.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid.	☽'s Right Aſcenſion at Noon.	☽'s Right Aſcenſ. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	Tu.	29	23. 16	291. 34	298. 38	16. 55 S	15. 44 S
2	W.	1	☌	305. 35	312. 22	14. 21	12. 47
3	Th.	2	0. 7	319. 1	325. 30	11. 3	9. 12
4	F.	3	0. 56	331. 51	338. 4	7. 16	5. 16
5	Sa.	4	1. 43	344. 10	350. 11	3. 14 S	1. 11 S
6	*Su.*	5	2. 28	356. 7	1. 59	0. 51 N	2. 51 N
7	M.	6	3. 12	7. 49	13. 38	4. 48	6. 41
8	Tu.	7	3. 56	19. 26	25. 15	8. 29	10. 11
9	W.	8	4. 40	31. 6	36. 59	11. 46	13. 14
10	Th.	9	5. 25	42. 55	48. 56	14. 33	15. 43
11	F.	10	6. 11	55. 0	61. 10	16. 44	17. 34
12	Sa.	11	6. 59	67. 25	73. 44	18. 12	18. 38
13	*Su.*	12	7. 48	80. 8	86. 37	18. 52	18. 53
14	M.	13	8. 38	93. 9	99. 45	18. 40	18. 13
15	Tu.	14	9. 29	106. 23	113. 3	17. 32	16. 37
16	W.	15	10. 20	119. 45	126. 27	15. 29	14. 7
17	Th.	16	11. 12	133. 9	139. 52	12. 33	10. 48
18	F.	17	12. 4	146. 34	153. 17	8. 53	6. 50
19	Sa.	18	12. 55	159. 59	166. 43	4. 40	2. 25 N
20	*Su.*	19	13. 47	173. 28	180. 15	0. 7 N	2. 11 S
21	M.	20	14. 40	187. 4	193. 57	4. 28 S	6. 42
22	Tu.	21	15. 34	200. 54	207. 54	8. 49	10. 49
23	W.	22	16. 30	215. 0	222. 9	12. 39	14. 17
24	Th.	23	17. 27	229. 23	236. 41	15. 42	16. 52
25	F.	24	18. 24	244. 1	251. 23	17. 46	18. 24
26	Sa.	25	19. 21	258. 44	266. 4	18. 45	18. 48
27	*Su.*	26	20. 16	273. 21	280. 33	18. 34	18. 4
28	M.	27	21. 10	287. 39	294. 38	17. 18	16. 18

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid^{r}. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	Tu.	15. 57	15. 53	58. 32	58. 18	4878	4896
2	W.	15. 49	15. 44	58. 3	57. 46	4915	4936
3	Th.	15. 40	15. 35	57. 28	57. 10	4958	4981
4	F.	15. 30	15. 24	56. 51	56. 32	5005	5029
5	Sa.	15. 19	15. 14	56. 13	55. 55	5054	5077
6	*Su.*	15. 9	15. 5	55. 37	55. 21	5100	5122
7	M.	15. 1	14. 58	55. 6	54. 54	5141	5157
8	Tu.	14. 55	14. 52	54. 43	54. 34	5171	5183
9	W.	14. 51	14. 49	54. 28	54. 24	5191	5197
10	Th.	14. 49	14. 49	54. 23	54. 24	5198	5197
11	F.	14. 51	14. 52	54. 28	54. 34	5191	5183
12	Sa.	14. 55	14. 58	54. 43	54. 55	5171	5155
13	*Su.*	15. 2	15. 6	55. 9	55. 25	5137	5116
14	M.	15. 11	15. 16	55. 43	56. 2	5093	5068
15	Tu.	15. 22	15. 28	56. 23	56. 44	5041	5014
16	W.	15. 34	15. 40	57. 6	57. 28	4986	4958
17	Th.	15. 46	15. 52	57. 50	58. 11	4931	4905
18	F.	15. 57	16. 2	58. 31	58. 49	4880	4858
19	Sa.	16. 6	16. 10	59. 5	59. 19	4838	4821
20	*Su.*	16. 13	16. 15	59. 30	59. 39	4808	4797
21	M.	16. 17	16. 18	59. 45	59. 48	4789	4786
22	Tu.	16. 18	16. 18	59. 49	59. 48	4784	4786
23	W.	16. 17	16. 16	59. 45	59. 40	4789	4795
24	Th.	16. 14	16. 11	59. 33	59. 25	4804	4813
25	F.	16. 9	16. 6	59. 16	59. 6	4824	4837
26	Sa.	16. 3	16. 0	58. 55	58. 43	4850	4865
27	*Su.*	15. 57	15. 53	58. 31	58. 18	4880	4896
28	M.	15. 50	15. 46	58. 5	57. 52	4912	4928

Diſtances of ☽'s Center from Sun, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
4	α Arietis.					56. 52. 5	55. 17. 54	53. 44. 4	52. 10. 36
5		50. 37. 32	49. 4. 53	47. 32. 38	46. 0. 50	44. 29. 28	42. 58. 34	41. 28. 9	39. 58. 14
6		38. 28. 51	36. 59. 58	35. 31. 41	34. 4. 1	32. 37. 2	31. 10. 46	29. 45. 16	28. 20. 35
7		26. 56. 43							
7	Aldebaran.	58. 7. 17	56. 35. 54	55. 4. 42	53. 33. 43	52. 2. 56	50. 32. 21	49. 1. 57	47. 31. 43
8		46. 1. 40	44. 31. 47	43. 2. 3	41. 32. 27	40. 3. 1	38. 33. 43	37. 4. 30	35. 35. 25
9		34. 6. 27	32. 37. 35	31. 8. 47	29. 40. 5	28. 11. 28	26. 42. 56	25. 14. 26	23. 46. 1
10		22. 17. 39							
10	Pollux.	65. 56. 15	64. 29. 48	63. 3. 24	61. 37. 3	60. 10. 44	58. 44. 28	57. 18. 15	55. 52. 3
11		54. 25. 54	52. 59. 46	51. 33. 39	50. 7. 35	48. 41. 33	47. 15. 32	45. 49. 35	44. 23. 42
12		42. 57. 52	41. 32. 8	40. 6. 30	38. 40. 57	37. 15. 32			
12	Regulus.					72. 26. 24	70. 56. 2	69. 25. 28	67. 54. 42
13		66. 23. 44	64. 52. 33	63. 21. 8	61. 49. 30	60. 17. 38	58. 45. 31	57. 13. 9	55. 40. 31
14		54. 7. 39	52. 34. 30	51. 1. 5	49. 27. 24	47. 53. 26	46. 19. 11	44. 44. 40	43. 9. 52
15		41. 34. 48	39. 59. 28	38. 23. 51	36. 47. 58	35. 11. 50	33. 35. 24	31. 58. 44	30. 21. 52
16		28. 44. 47	27. 7. 32	25. 30. 8	23. 52. 36	22. 14. 57			
16	Spica ♍					75. 28. 44	73. 48. 37	72. 8. 11	70. 27. 25
17		68. 46. 20	67. 4. 55	65. 23. 12	63. 41. 10	61. 58. 49	60. 16. 9	58. 33. 11	56. 49. 56
18		55. 6. 23	53. 22. 34	51. 38. 28	49. 54. 7	48. 9. 30	46. 24. 39	44. 39. 33	42. 54. 14

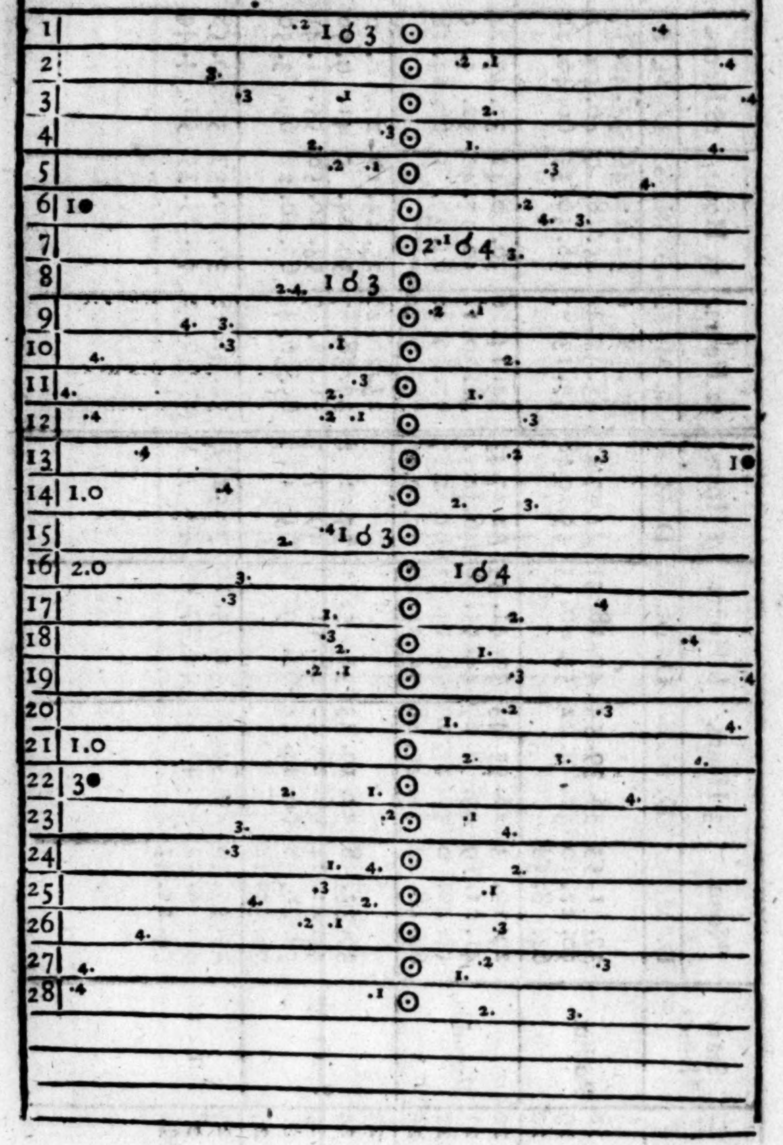
Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
19	Spica ♍	41. 8. 42	39. 22. 57	37. 37. 0	35. 50. 52	34. 4. 34	32. 18. 7	30. 31. 31	28. 44. 47
20		26. 57. 56	25. 10. 59	23. 23. 57	21. 36. 51	19. 49. 41			
20	Antares.					65. 41. 4	63. 54. 43	62. 8. 19	60. 21. 54
21		58. 35. 28	56. 49. 3	55. 2. 39	53. 16. 19	51. 30. 1	49. 43. 47	47. 57. 40	46. 11. 40
22		44. 25. 48	42. 40. 6	40. 54. 36	39. 9. 21	37. 24. 21	35. 39. 40	33. 55. 18	32. 11. 18
23		30. 27. 41							
23	α Aquilæ.	82. 19. 33	80. 41. 44	79. 4. 4	77. 26. 37	75. 49. 21	74. 12. 21	72. 35. 38	70. 59. 13
24		69. 23. 5	67. 47. 18	66. 11. 56	64. 36. 58	63. 2. 25	61. 28. 22	59. 54. 49	58. 21. 47
25		56. 49. 20							
22	The Sun.							121. 17. 37	119. 37. 49
23		117. 58. 5	116. 18. 26	114. 38. 52	112. 59. 23	111. 19. 59	109. 40. 40	108. 1. 28	106. 22. 23
24		104. 43. 22	103. 4. 30	101. 25. 46	99. 47. 9	98. 8. 39	96. 30. 16	94. 52. 4	93. 13. 58
25		91. 36. 0	89. 58. 11	88. 20. 32	86. 43. 1	85. 5. 39	83. 28. 25	81. 51. 22	80. 14. 27
26		78. 37. 41	77. 1. 5	75. 24. 38	73. 48. 21	72. 12. 13	70. 36. 15	69. 0. 26	67. 24. 47
27		65. 49. 18	64. 13. 59	62. 38. 51	61. 3. 52	59. 29. 3	57. 54. 24	56. 19. 55	54. 45. 36
28		53. 11. 28	51. 37. 31	50. 3. 45	48. 30. 10	46. 56. 46	45. 23. 33	43. 50. 31	42. 17. 39
M1		40. 44. 59							

Diſtances of ☽'s Center from Sun, and from Stars weſt of her.

Days.	Stars Names.	Noon. D. M. S.	3 Hours. D. M. S.	6 Hours. D. M. S.	9 Hours. D. M. S.	12 Hours. D. M. S.	15 Hours. D. M. S.	18 Hours. D. M. S.	21 Hours. D. M. S.
6	The Sun.	39. 4.43	40.29.48	41.54.39	43.19.17	44.43.43	46. 7.56	47.31.56	48.55.45
7		50.19.21	51.42.45	53. 5.58	54.29. 0	55.51.51	57.14.31	58.37. 1	59.59.21
8		61.21.32	62.43.34	64. 5.29	65.27.15	66.48.54	68.10.26	69.31.52	70.53.12
9		72.14.27	73.35.37	74.56.43	76.17.44	77.38.43	78.59.39	80.20.33	81.41.26
10		83. 2.17	84.23. 9	85.44. 2	87. 4.55	88.25.50	89.46.46	91. 7.46	92.28.48
11		93.49.55	95.11. 7	96.32.24	97.53.47	99.15.16	100.36.51	101.58.35	103.20.26
12		104.42.25	106. 4.34	107.26.53	108.49.22	110.12. 1	111.34.52	112.57.55	114.21.10
13		115.44.38	117. 8.19	118.32.14	119.56.22	121.20.45			
10	α Pegaſi.					62.53.55	64.18. 4	65.42.23	67. 6.52
11		68.31.30	69.56.18	71.21.16	72.46.24	74.11.41	75.37. 8	77. 2.45	78.28.33
12		79.54.31	81.20.40	82.47. 1	84.13.33	85.40.17			
12	α Arietis.					42. 2.36	43.29.45	44.57.16	46.25. 9
13		47.53.23	49.22. 0	50.50.57	52.20.17	53.49.57	55.19.59	56.50.21	58.21. 4
14		59.52. 8	61.23.33	62.55.19	64.27.25	65.59.52			
14	Aldebaran.					32.17.14	33.51.54	35.26.53	37. 2.11
15		38.37.49	40.13.47	41.50. 5	43.26.43	45. 3.41	46.41. 1	48.18.42	49.56.43
16		51.35. 5	53.13.47	54.52.50	56.32.13	58.11.56	59.52. 1	61.32.25	63.13.10
17		64.54.14	66.35.38	68.17.21	69.59.23	71.41.44			

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
17	Pollux.					30. 38. 9	32. 12. 46	33. 48. 17	35. 24. 39
18		37. 1. 53	38. 39. 54	40. 18. 31	41. 57. 47	43. 37. 44	45. 18. 9	46. 59. 1	48. 40. 21
19		50. 22. 10	52. 4. 22	53. 46. 55	55. 29. 48	57. 13. 3	58. 56. 35	60. 40. 22	62. 24. 22
20		64. 8. 38							
20	Regulus.	27. 10. 3	28. 55. 43	30. 41. 35	32. 27. 43	34. 14. 6	36. 0. 42	37. 47. 24	39. 34. 16
21		41. 21. 19	43. 8. 27	44. 55. 38	46. 42. 54	48. 30. 15	50. 17. 40	52. 5. 5	53. 52. 31
22		55. 40. 0	57. 27. 27	59. 14. 53	61. 2. 17	62. 49. 40	64. 37. 1	66. 24. 18	68. 11. 32
23		69. 58. 42	71. 45. 48	73. 32. 48	75. 19. 41	77. 6. 30			
23	Spica ♍					23. 26. 27	25. 13. 16	27. 0. 0	28. 46. 37
24		30. 33. 8	32. 19. 33	34. 5. 51	35. 52. 2	37. 38. 7	39. 24. 5	41. 9. 56	42. 55. 39
25		44. 41. 14	46. 26. 40	48. 11. 58	49. 57. 7	51. 42. 7	53. 26. 58	55. 11. 41	56. 56. 14
26		58. 40. 38	60. 24. 54	62. 9. 0	63. 52. 57	65. 36. 44	67. 20. 22	69. 3. 50	70. 47. 9
27		72. 30. 18							
27	Antares.	27. 55. 50	29. 34. 25	31. 13. 10	32. 52. 8	34. 31. 18	36. 10. 37	37. 49. 58	39. 29. 24
28		41. 8. 52	42. 48. 18	44. 27. 40	46. 7. 1	47. 46. 20	49. 25. 35	51. 4. 44	52. 43. 47
M1		54. 22. 45							

Configurations of the SATELLITES of JUPITER at Eleven o' Clock at Night.



Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Tu.	David.
2	W.	Chad.
3	Th.	
4	F.	
5	Sa.	
6	*Su.*	*Quinquageſima-Sunday.*
7	M.	Perpetua.
8	Tu.	
9	W.	*Aſh W'edneſday.*
10	Th.	
11	F.	
12	Sa.	Gregory, M.
13	*Su.*	*1ſt Sunday in Lent.*
14	M.	
15	Tu.	
16	W.	
17	Th.	
18	F.	Edw. K. of W. Saxons.
19	Sa.	
20	*Su.*	*2d Sunday in Lent.*
21	M.	Benedict.
22	Tu.	
23	W.	
24	Th.	
25	F.	*Annun. of V. Mary.*
26	Sa.	
27	*Su.*	*3d Sunday in Lent.*
28	M.	
29	Tu.	
30	W.	
31	Th.	

Phaſes of the Moon.

	D. H. M.
New Moon - -	4. 8. 28
Firſt Quarter - -	12. 11. 59
Full Moon - - -	19. 19. 13
Laſt Quarter - -	26. 10. 52

Other Phenomena.

D. H. M.	
1. 1.15	☾ β ♑
6.19.15	☾ ε ♓
23.52	☾ ζ ♓
10.22.53	☾ 1 ad δ ♉
23.24	☾ 2 ad δ ♉
11.	☿ ι ♒ diff. Lat. [23′.
2. 6	☾ ε ♉
16. 6. 8	Em. of 1 ad α ♋ * 1′½ S. of ☾'s cent.
7.36	☾ 2 ad α ♋
12. 6	Im. of κ ♋ * 2′½ N. of ☾'s cent.
13.10¼	Em. * 4′ N.
17. 2.26	☾ ο ♌
11.16	☾ π ♌
18.	♀ ζ ♓ diff. Lat.
19. 6.47	☾ υ ♌ [35′.
20. 3.34	☉ enters ♈
22. 3.11	☾ λ ♍
23. 8.40	☾ 4 ad ζ ♎
16.36	☾ θ ♎
28. 6.53	☾ β ♑
30.12.43	☾ θ ♒

MARCH 1791.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Afc. in Time.	Sun's Declin. South.	Equat. of Time. Add.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	Tu.	11. 10.54.57	22. 49.34,2	7. 28. 49	12. 37,6	
2	W.	11. 11.55. 4	22. 53.18,4	7. 5. 57	12. 25,2	12,4
3	Th.	11. 12.55. 9	22. 57. 2,1	6. 42. 58	12. 12,4	12,8
4	F.	11. 13.55.12	23. 0.45,3	6. 19. 54	11. 59,1	13,3
5	Sa.	11. 14.55.13	23. 4.28,1	5. 56. 45	11. 45,4	13,7
6	*Su.*	11. 15.55.13	23. 8.10,5	5. 33. 31	11. 31,2	14,2
7	M.	11. 16.55.10	23. 11.52,4	5. 10. 13	11. 16,6	14,6
8	Tu.	11. 17.55. 5	23. 15.33,9	4. 46. 50	11. 1,6	15,0
9	W.	11. 18.54.58	23. 19.15,0	4. 23. 24	10. 46,2	15,4
10	Th.	11. 19.54.50	23. 22.55,8	3. 59. 55	10. 30,5	15,7
11	F.	11. 20.54.38	23. 26.36,2	3. 36. 23	10. 14,4	16,1
12	Sa.	11. 21.54.24	23. 30.16,3	3. 12. 49	9. 58,0	16,4
13	*Su.*	11. 22.54. 7	23. 33.56,1	2. 49. 12	9. 41,3	16,7
14	M.	11. 23.53.49	23. 37.35,6	2. 25. 35	9. 24,3	17,0
15	Tu.	11. 24.53.28	23. 41.14,8	2. 1. 55	9. 7,0	17,3
16	W.	11. 25.53. 5	23. 44.53,7	1. 38. 15	8. 49,5	17,5
17	Th.	11. 26.52.39	23. 48.32,5	1. 14. 34	8. 31,7	17,8
18	F.	11. 27.52.11	23. 52.11,0	0. 50. 53	8. 13,7	18,0
19	Sa.	11. 28.51.42	23. 55.49,4	0. 27. 12	7. 55,5	18,2
20	*Su.*	11. 29.51.10	23. 59.27,6	0. 3. 31	7. 37,2	18,3
				—North.—		
21	M.	0. 0.50.36	0. 3. 5,6	0. 20. 9	7. 18,8	18,4
22	Tu.	0. 1.50. 0	0. 6.43,6	0. 43. 48	7. 0,3	18,5
23	W.	0. 2.49.22	0. 10.21,5	1. 7. 25	6. 41,7	18,6
24	Th.	0. 3.48.43	0. 13.59,4	1. 31. 1	6. 23,1	18,6
25	F.	0. 4.48. 2	0. 17.37,3	1. 54. 35	6. 4,4	18,7
26	Sa.	0. 5.47.19	0. 21.15,1	2. 18. 6	5. 45,7	18,7
27	*Su.*	0. 6.46.34	0. 24.52,9	2. 41. 34	5. 27,0	18,7
28	M.	0. 7.45.48	0. 28.30,8	3. 4. 59	5. 8,4	18,6
29	Tu.	0. 8.45. 0	0. 32. 8,7	3. 28. 21	4. 49,8	18,6
30	W.	0. 9.44.10	0. 35.46,7	3. 51. 39	4. 31,3	18,5
31	Th.	0. 10.43.18	0. 39.24,8	4. 14. 53	4. 12,9	18,4

Days.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	16. 10,7	1. 5,2	2. 30,2	9. 996420	6. 24. 9
7	16. 9,3	1. 4,9	2. 29,7	9. 997109	6. 23. 50
13	16. 7,6	1. 4,6	2. 29,2	9. 997801	6. 23. 31
19	16. 6,0	1. 4,4	2. 28,8	9. 998523	6. 23. 12
25	16. 4,3	1. 4,3	2. 28,3	9. 999282	6. 22. 53

ECLIPSES of the SATELLITES of JUPITER.

I. Satellite. Immerſions.

Days	H. M. S.
*1	9. 14. 43
3	3. 43. 35
4	22. 12. 30
*6	16. 41. 27
*8	11. 10. 21
10	5. 39. 22
12	0. 8. 19
13	18. 37. 24
*15	13. 6. 23
	Emerſions.
*17	9. 47. 22
19	4. 16. 23
20	22. 45. 27
22	17. 14. 33
*24	11. 43. 39
26	6. 12. 42
28	0. 41. 50
29	19. 10. 54
*31	13. 40. 2

II. Satellite. Immerſions.

Days	H. M. S.
*4	8. 20. 55
7	21. 38. 56
*11	10. 57. 7
15	0. 15. 23
	Emerſions.
*18	16. 16. 6
22	5. 34. 22
25	18. 52. 53
*29	8. 11. 30

III. Satellite.

Days	H. M. S.
*1	10. 36. 24 I
*1	13. 25. 14 E
*8	14. 36. 32 I
*8	17. 24. 22 E
15	18. 37. 9 I
15	21. 23. 59 E
22	22. 38. 1 I
23	1. 23. 49 E
30	2. 39. 3 I
30	5. 23. 49 E

IV. Satellite.

Days	H. M. S.
12	19. 5. 2 I
12	22. 15. 23 E
*29	13. 9. 35 I
*29	16. 13. 0 E

MARCH 1791. IV.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Passage over Merid
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
MERCURY. Gr. Elong. 1ᵈ.						
1	7. 22. 22	0. 48 S	10. 13. 45	0. 23 S	17. 5 S	22. 16
4	8. 0. 47	1. 49	10. 16. 59	0. 51	16. 34	22. 19
7	8. 9. 3	2. 46	10. 20. 32	1. 15	15. 51	22. 23
10	8. 17. 17	3. 40	10. 24. 22	1. 35	14. 55	22. 27
13	8. 25. 34	4. 29	10. 28. 26	1. 52	13. 47	22. 33
16	9. 4. 0	5. 13	11. 2. 45	2. 5	12. 27	22. 39
19	9. 12. 40	5. 52	11. 7. 15	2. 14	10. 56	22. 46
22	9. 21. 40	6. 23	11. 11. 59	2. 19	9. 13	22. 53
25	10. 1. 8	6. 46	11. 16. 54	2. 20	7. 19	23. 0
28	10. 11. 11	6. 59	11. 22. 0	2. 17	5. 17	23. 9
31	10. 21. 58	6. 58	11. 27. 21	2. 9	3. 2	23. 17
VENUS.						
1	0. 14. 15	2. 57 S	11. 24. 55	1. 18 S	3. 13 S	0. 54
7	0. 23. 50	2. 38	0. 2. 22	1. 10	0. 8 S	0. 59
13	1. 3. 25	2. 14	0. 9. 49	1. 0	2. 58 N	1. 4
19	1. 13. 1	1. 47	0. 17. 14	0. 48	6. 2	1. 9
25	1. 22. 38	1. 17	0. 24. 39	0. 35	9. 1	1. 14
MARS. ☌ 7ᵈ. 14ʰ.						
1	11. 13. 21	1. 40 S	11. 12. 20	0. 58 S	7. 51 S	0. 6
7	11. 17. 8	1. 37	11. 17. 3	0. 56	5. 59	0. 2
13	11. 20. 55	1. 33	11. 21. 45	0. 54	4. 7	23. 56
19	11. 24. 41	1. 29	11. 26. 26	0. 52	2. 13	23. 52
25	11. 28. 26	1. 25	0. 1. 4	0. 49	0. 20	23. 47
JUPITER. ☍ 16ᵈ. 19ʰ.						
1	5. 25. 29	1. 17 N	5. 28. 40	1. 33 N	1. 57 N	13. 6
7	5. 25. 56	1. 17	5. 27. 56	1. 34	2. 16	12. 41
13	5. 26. 23	1. 17	5. 27. 10	1. 34	2. 34	12. 16
19	5. 26. 51	1. 17	5. 26. 23	1. 35	2. 53	11. 51
25	5. 27. 18	1. 18	5. 25. 37	1. 35	3. 11	11. 26
SATURN. ☌ 29ᵈ. 1½ʰ.						
1	0. 7. 51	2. 26 S	0. 5. 22	2. 13 S	0. 6 N	1. 33
7	0. 8. 4	2. 26	0. 6. 5	2. 13	0. 23	1. 14
13	0. 8. 16	2. 26	0. 6. 49	2. 13	0. 41	0. 54
19	0. 8. 28	2. 26	0. 7. 34	2. 12	0. 59	0. 35
25	0. 8. 41	2. 26	0. 8. 18	2. 12	1. 16	0. 16

MARCH 1791.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	Tu.	10. 0.25.56	10. 7. 7.42	5. 6.29 N	4.59 32 N
2	W.	10. 13.46.22	10. 20.21.46	4.48.34	4.33.50
3	Th	10. 26.53.46	11. 3.22.13	4.15.38	3.54.16
4	F.	11. 9.47. 4	11. 16. 8.14	3.30. 5	3. 3.30
5	Sa.	11. 22.25.46	11. 28.39.41	2.34.52	2. 4.37
6	*Su.*	0. 4.50. 7	0. 10.57.13	1.33. 8	1. 0.48 N
7	M.	0. 17. 1.16	0. 23. 2.31	0.28. 0 N	0. 4.53 S
8	Tu.	0. 29. 1.23	1. 4.58.15	0.37.33 S	1. 9.38
9	W.	1. 10.53.34	1. 16.47.52	1.40.52	2.10.57
10	Th.	1. 22.41.43	1. 28.35.40	2.39.36	3. 6.33
11	F.	2. 4.30.20	2. 10.26.21	3.31.37	3.54.29
12	Sa.	2. 16.24.20	2. 22.24.56	4.14.56	4.32.45
13	*Su.*	2. 28.28.45	3. 4.36.23	4.47.40	4.59.29
14	M.	3. 10.48.26	3. 17. 5.22	5. 7.58	5.12.53
15	Tu.	3. 23.27.42	3. 29.55.47	5.14. 4	5.11.17
16	W.	4. 6.29.54	4. 13.10.15	5. 4.25	4.53.21
17	Th.	4. 19.56.54	4. 26.49.45	4.38. 1	4.18.27
18	F.	5. 3.48.34	5. 10.53. 1	3.54.47	3.27.12
19	Sa.	5. 18. 2.34	5. 25.16.35	2.56. 2	2.21.41
20	*Su.*	6. 2.34.20	6. 9.54.57	1.44.43	1. 5.44 S
21	M.	6. 17.17.36	6. 24.41.18	0.25.27 S	0.15.26 N
22	Tu.	7. 2. 5.12	7. 9.28.24	0.56. 1 N	1.35.39
23	W.	7. 16.50. 8	7. 24. 9.39	2.13.34	2.49. 5
24	Th.	8. 1.26.23	8. 8.39.46	3.21.38	3.50.42
25	F.	8. 15.49.28	8. 22.55. 7	4.15.53	4.36.54
26	Sa.	8. 29.56.32	9. 6.53.36	4.53.33	5. 5.42
27	*Su.*	9. 13.46.15	9. 20.34.33	5.13.19	5.16.26
28	M.	9. 27.18.27	10. 3.58.12	5.15. 9	5. 9.37
29	Tu.	10. 10.33.49	10. 17. 5.32	5. 0. 3	4.46.39
30	W.	10. 23.33.29	10. 29.57.47	4.29.44	4. 9.34
31	Th.	11. 6.18.42	11. 12.36.16	3.46.30	3.20.51

MARCH 1791. VI.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid.	☽'s Right Aſcenſ. at Noon.	☽'s Right Aſcenſ. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	Tu.	28	22. 2	301. 30	308. 14	15. 5 S	13. 41 S
2	W.	29	22. 51	314. 50	321. 18	12. 6	10. 23
3	Th.	30	23. 39	327. 39	333. 53	8. 33	6. 38
4	F.	1	☌	340. 1	346. 3	4. 40	2. 39 S
5	Sa.	2	0. 24	352. 2	357. 57	0. 38 S	1. 22 N
6	*Su.*	3	1. 9	3. 49	9. 40	3. 21 N	5. 16
7	M.	4	1. 54	15. 30	21. 21	7. 7	8. 53
8	Tu.	5	2. 38	27. 12	33. 5	10. 33	12. 6
9	W.	6	3. 23	39. 0	44. 58	13. 30	14. 46
10	Th.	7	4. 9	50. 59	57. 4	15. 53	16. 50
11	F.	8	4. 56	63. 13	69. 25	17. 35	18. 10
12	Sa.	9	5. 44	75. 41	82. 1	18. 33	18. 43
13	*Su.*	10	6. 33	88. 24	94. 50	18. 40	18. 24
14	M.	11	7. 23	101. 19	107. 50	17. 55	17. 12
15	Tu.	12	8. 13	114. 24	120. 59	16. 16	15. 6
16	W.	13	9. 4	127. 35	134. 13	13. 45	12. 11
17	Th.	14	9. 56	140. 53	147. 34	10. 26	8. 32
18	F.	15	10. 48	154. 17	161. 3	6. 28	4. 18 N
19	Sa.	16	11. 41	167. 52	174. 44	2. 2 N	0. 17 S
20	*Su.*	17	12. 35	181. 40	188. 41	2. 37 S	4. 56
21	M.	18	13. 30	195. 47	202. 58	7. 11	9. 20
22	Tu.	19	14. 27	210. 14	217. 35	11. 20	13. 9
23	W.	20	15. 26	225. 1	232. 30	14. 45	16. 6
24	Th.	21	16. 25	240. 2	247. 34	17. 11	17. 59
25	F.	22	17. 23	255. 5	262. 33	18. 28	18. 40
26	Sa.	23	18. 20	269. 56	277. 14	18. 34	18. 12
27	*Su.*	24	19. 14	284. 24	291. 26	17. 34	16. 41
28	M.	25	20. 6	298. 19	305. 3	15. 35	14. 16
29	Tu.	26	20. 56	311. 38	318. 5	12. 47	11. 10
30	W.	27	21. 43	324. 24	330. 35	9. 26	7. 36
31	Th.	28	22. 29	336. 41	342. 41	5. 52	3. 45

MARCH 1791.

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid^{r}. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	Tu.	15. 43	15. 39	57, 39	57. 25	4945	4962
2	W.	15. 35	15. 31	57. 10	56. 55	4981	5000
3	Th.	15. 27	15. 22	56. 40	56. 25	5019	5038
4	F.	15. 18	15. 14	56, 10	55. 55	5058	5077
5	Sa.	15, 10	15. 6	55. 40	55. 26	5097	5115
6	*Su.*	15, 3	15. 0	55. 13	55. 1	5132	5148
7	M,	14. 57	14. 54	54. 50	54. 40	5162	5175
8	Tu.	14. 52	14. 50	54. 32	54. 25	5186	5195
9	W.	14. 49	14. 48	54. 21	54. 18	5201	5205
10	Th.	14. 48	14. 48	54. 18	54. 20	5205	5202
11	F.	14. 49	14. 51	54. 24	54. 31	5197	5187
12	Sa.	14. 54	14. 57	54. 41	54. 53	5174	5158
13	*Su.*	15. 1	15. 6	55. 8	55. 25	5138	5116
14	M.	15. 11	15. 17	55. 44	56. 5	5091	5064
15	Tu.	15. 24	15. 30	56. 29	56. 54	5033	5002
16	W.	15. 37	15. 44	57. 20	57. 46	4968	4936
17	Th.	15. 52	15. 59	58, 13	58. 39	4902	4870
18	F.	16. 6	16. 12	59. 4	59. 27	4839	4811
19	Sa.	16. 17	16. 22	59. 47	60. 5	4787	4765
20	*Su.*	16. 26	16. 29	60. 20	60. 31	4747	4734
21	M.	16. 32	16. 33	60. 39	60. 43	4724	4719
22	Tu.	16. 33	16. 32	60. 43	60. 39	4719	4724
23	W.	16. 30	16. 27	60. 32	60. 21	4733	4746
24	Th.	16. 23	16. 18	60. 7	59. 51	4763	4782
25	F.	16. 14	16. 10	59. 35	59. 18	4801	4822
26	Sa.	16. 5	15. 59	59. 0	58. 40	4844	4869
27	*Su.*	15. 54	15. 49	58. 20	58. 1	4893	4917
28	M.	15. 43	15. 38	57. 42	57. 23	4941	4965
29	Tu.	15. 33	15. 28	57. 5	56. 47	4987	5010
30	W.	15. 24	15. 19	56. 30	56. 14	5032	5053
31	Th.	15. 15	15. 11	55. 59	55. 45	5072	5090

Diſtances of ☽'s Center from Sun, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S	D. M. S.	D. M. S.	D. M. S.
6	Aldebaran.	62. 21. 20	60. 49. 0	59. 16. 52	57. 44. 55	56. 13. 9	54. 41. 35	53. 10. 11	51. 38. 59
7		50. 7. 57	48. 37. 6	47. 6. 25	45. 35. 54	44. 5. 33	42. 35. 21	41. 5. 17	39. 35. 23
8		38. 5. 37	36. 35. 59	35. 6. 30	33. 37. 8	32. 7. 54	30. 38. 47	29. 9. 46	27. 40. 52
9		26. 12. 5	24. 43. 23	23. 14. 47	21. 46. 16	20. 17. 51			
9	Pollux..					64. 2. 41	62. 36. 22	61. 10. 8	59. 44. 1
10		58. 17. 58	56. 52. 2	55. 26. 10	54. 0. 26	52. 34. 46	51. 9. 11	49. 43. 42	48. 18. 20
11		46. 53. 3	45. 27. 52	44. 2. 49	42. 37. 54	41. 13. 8	39. 48. 32	38. 24. 7	36. 59. 53
12		35. 35. 52							
12	Regulus.	70. 37. 25	69. 8. 0	67. 38. 28	66. 8. 47	64. 38. 54	63. 8. 51	61. 38. 38	60. 8. 12
13		58. 37. 36	57. 6. 47	55. 35. 44	54. 4. 28	52. 32. 59	51. 1. 14	49. 29. 14	47. 57. 0
14		46. 24. 30	44. 51. 44	43. 18. 42	41. 45. 25	40. 11. 51	38. 37. 59	37. 3. 50	35. 29. 26
15		33. 54. 45	32. 19. 46	30. 44. 33	29. 9. 6	27. 33. 26	25. 57. 34	24. 21. 32	22. 45. 21
16		21. 9. 1							
16	Spica ♍	74. 19. 28	72. 40. 24	71. 0. 55	69. 21. 2	67. 40. 44	66. 0. 2	64. 18. 55	62. 37. 24
17		60. 55. 29	59. 13. 9	57. 30. 25	55. 47. 17	54. 3. 45	52. 19. 50	50. 35. 31	48. 50. 50
18		47. 5. 45	45. 20. 17	43. 34. 28	41. 48. 18	40. 1. 47	38. 14. 55	36. 27. 44	34. 40. 16
19		32. 52. 28	31. 4. 22	29. 16. 2	27. 27. 27	25. 38. 37	23. 49. 33	22. 0. 22	20. 11. 0
20		18. 21. 26							

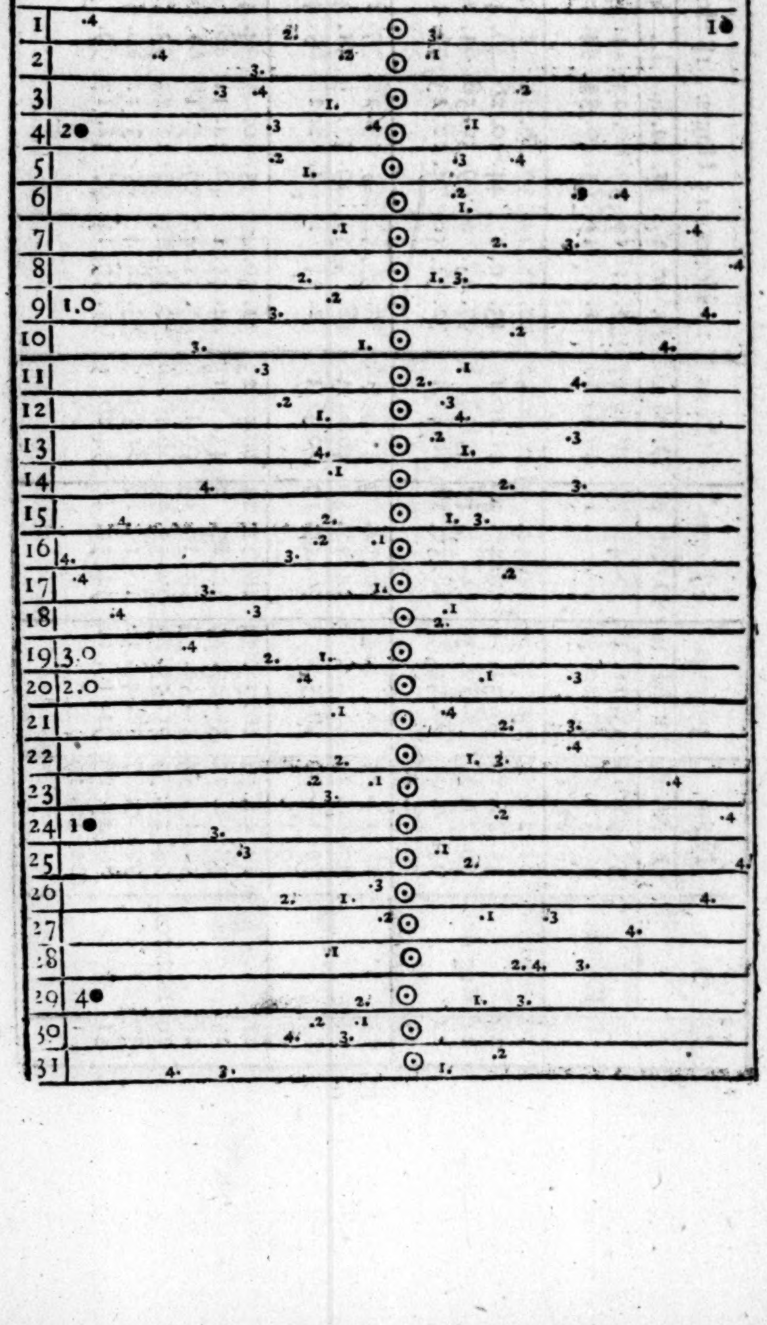
Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
20	Antares.	64.13.39	62.24.47	60.35.49	58.46.43	56.57.29	55. 8.13	53.18.54	51.29.35
21		49.40.15	47.50.57	46. 1.44	44.12.37	42.23.39	40.34.48	38.46.12	36.57.53
22		35. 9.52	33.22.15	31.35. 5	29.48.23	28. 2.14			
22	α Aquilæ.					79.56.24	78.15.28	76.34.46	74.54.19
23		73.14.12	71.34.24	69.55. 1	68.16. 1	66.37.28	64.59.21	63.21.49	61.44.49
24		60. 8.26	58.32.39	56.57.37	55.23.19	53.49.49	52.17.11	50.45.28	49.14.44
25		47.45. 0							
25	α Pegaſi.	93. 3. 1	91.20.48	89.38.52	87.57.14	86.15.53	84.34.49	82.54. 2	81.13.34
26		79.33.24	77.53.36	76.14. 8	74.34.59	72.56.10			
24	The Sun.	122.18.35	120.37.18	118.56.15	117.15.27	115.34.54	113.54.36	112.14.34	110.34.46
25		108.55.17	107.16. 4	105.37. 7	103.58.28	102.20. 5	100.42. 0	99. 4.13	97.26.43
26		95.49.3[illegible]	94.12.34	92.35.55	90.59.33	89.23.29	87.47.42	86.12.13	84.37. 0
27		83. 2. 4	81.27.24	79.53. 1	78.18.54	76.45. 4	75.11.31	73.38.14	72. 5.13
28		70.32.28	68.59.57	67.27.41	65.55.41	64.23.55	62.52.24	61.21. 7	59.50. 5
29		58.19.17	56.48.42	55.18.21	53.48.13	52.18.19	50.48.38	49.19. 9	47.49.53
30		46.20.50	44.51.59	43.23.20	41.54.52	40.26.37			

Diſtances of ☽'s Center from Sun, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Antares.	54. 22. 42	56. 1. 32	57. 40. 15	59.18.51	60. 57. 19	62. 35. 38	64. 13. 49	65.51.51
2		67. 29. 44	69. 7. 27	70. 45. 1	72.22.24	73. 59. 37	75. 36. 40	77. 13. 32	78.50.13
3		80. 26. 44							
7	The Sun.								39.44.25
8		41. 6. 32	42. 28. 32	43. 50. 25	45.12.13	46. 33. 54	47. 55. 29	49. 16. 58	50.38.24
9		51. 59. 44	53. 21. 1	54. 42. 15	56. 3.26	57. 24. 34	58. 45. 39	60. 6. 43	61.27.46
10		62. 48. 47	64. 9. 48	65. 30. 50	66.51.53	68. 12. 57	69. 34. 2	70. 55. 11	72.16.22
11		73. 37. 37	74. 58. 56	76. 20. 20	77.41.49	79. 3. 24	80. 25. 4	81. 46. 52	83. 8.47
12		84. 30. 50	85. 53. 3	87. 15. 25	88.37.58	90. 0. 41	91. 23. 34	92. 46. 39	94. 9.57
13		95. 33. 27	96. 57. 11	98. 21. 9	99.45.22	101. 9. 50	102. 34. 34	103. 59. 34	105.24.51
14		106. 50. 25	108. 16. 17	109. 42. 27	111. 8.57	112. 35. 45	114. 2. 54	115. 30. 24	116.58.15
15		118. 26. 26	119. 54. 59	121. 23. 54					
12	Aldebaran.					15. 30. 42	17. 0. 34	18. 30. 43	20. 1. 7
13		21. 31. 47	23. 2. 43	24. 33. 56	26. 5.26	27. 37. 12	29. 9. 15	30. 41. 36	32.14.15
14		33. 47. 12	35. 20. 27	36. 54. 1	38.27.54	40. 2. 7	41. 36. 41	43. 11. 35	44.46.51
15		46. 22. 28	47. 58. 26	49. 34. 47	51.11.31	52. 48. 37	54. 26. 6	56. 3. 59	57.42.16
16		59. 20. 56	61. 0. 1	62. 39. 30	64.19.23	65. 59. 41	67. 40. 23	69. 21. 30	71. 3. 2
17		72. 44. 59							

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
17	Pollux.	31. 38. 11	33. 12. 48	34. 48. 19	36. 24. 47	38. 2. 10	39. 40. 23	41. 19. 21	42. 59. 4
18		44. 39. 31	45. 20. 34	48. 2. 13	49. 44. 26	51. 27. 15	53. 10. 33	54. 54. 19	56. 38. 34
19		58. 23. 18							
19	Regulus.	21. 22. 7	23. 7. 53	24. 54. 9	26. 40. 58	28. 28. 21	30. 16. 11	32. 4. 23	33. 52. 58
20		35. 41. 56	37. 31. 9	39. 20. 36	41. 10. 19	43. 0. 17	44. 50. 26	46. 40. 45	48. 31. 12
21		50. 21. 49	52. 12. 31	54. 3. 17	55. 54. 8	57. 45. 2	59. 35. 58	61. 26. 54	63. 17. 50
22		65. 8. 45	66. 59. 37	68. 50. 26	70. 41. 10	72. 31. 50	74. 22. 23	76. 12. 50	78. 3. 8
23		79. 53. 18							
23	Spica ♍	26. 14. 25	28. 4. 32	29. 54. 29	31. 44. 16	33. 33. 54	35. 23. 22	37. 12. 37	39. 1. 41
24		40. 50. 32	42. 39. 8	44. 27. 30	46. 15. 38	48. 3. 31	49. 51. 9	51. 38. 32	53. 25. 38
25		55. 12. 29	56. 59. 2	58. 45. 19	60. 31. 19	62. 17. 2	64. 2. 28	65. 47. 37	67. 32. 29
26		69. 17. 3							
26	Antares.	24. 54. 54	26. 33. 33	28. 12. 24	29. 51. 23	31. 30. 40	33. 10. 3	34. 49. 28	36. 28. 56
27		38. 8. 25	39. 47. 47	41. 27. 3	43. 6. 13	44. 45. 18	46. 24. 14	48. 2. 54	49. 41. 29
28		51. 19. 54	52. 58. 9	54. 36. 13	56. 14. 6	57. 51. 48	59. 29. 18	61. 6. 36	62. 43. 43
29		64. 20. 39	65. 57. 23	67. 33. 55	69. 10. 16	70. 46. 25	72. 22. 23	73. 58. 9	75. 33. 44
30		77. 9. 7	78. 44. 18	80. 19. 18	81. 54. 7	83. 28. 4	85. 3. 12	86. 37. 29	88. 11. 34
31		89. 45. 29	91. 19. 12	92. 52. 44	94. 26. 5	95. 59. 16	97. 32. 17	99. 5. 7	100. 37. 48
A 1		102. 10. 19							

Configurations of the SATELLITES of JUPITER at Ten o' Clock at Night.



APRIL 1791.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	F.	
2	Sa.	
3	*Su.*	*4th Su. in Lent.* Rich. Bp. of Chich.
4	M.	St. Ambroſe.
5	Tu.	
6	W.	
7	Th.	
8	F.	
9	Sa.	
10	*Su.*	*5th Sunday in Lent.*
11	M.	
12	Tu.	
13	W.	
14	Th.	
15	F.	Camb. Term ends.
16	Sa.	Oxford Term ends.
17	*Su.*	*6th Sunday in Lent. Palm-Sunday.*
18	M.	
19	Tu.	Alphege.
20	W.	
21	Th.	
22	F.	*Good Friday.*
23	Sa.	St. George.
24	*Su.*	*Eaſter-Day.*
25	M.	*St. Mark. Prs. Mary born.*
26	Tu.	
27	W.	
28	Th.	
29	F.	
30	Sa.	

Phaſes of the Moon.

	D.	H.	M.
New Moon —	3.	0.	41
Firſt Quarter —	11.	5.	17
Full Moon —	18.	4.	48
Laſt Quarter —	24.	19.	47

Other Phenomena.

D.	H.M.	
3.		☉ eclipſed, viſ.
5.		♃ β ♍ diff. Lat. 52′.
	1.56	☾ ♀
7.	6.50¼	Im. of 1 ad δ ♉ * 4′ N. of ☾'s center.
	7.54	Em. * 8′ N.
	7.25½	Im. of 2 ad δ ♉ * 2′¼. S. of ☾'s center.
	8.33	Em. * 2′¼ N.
	9.25	☾ ε ♉
12.	16. 1	☾ 1 ad α ♋
	17. 0	☾ 2 ad α ♋
	21.40	☾ κ ♋
13.	12.19	☾ ο ♌
	21.20	☾ π ♌
15.	17.35	☾ υ ♌
18.		☾ eclipſ. inviſ.
	13.31	☾ λ ♍
19.	2.26	☾ α ♎
	16.18	☉ enters ♉
	18.12	☾ 4 ad ζ ♎
20.	1.54	☾ θ ♎
24.	12.54	☾ β ♑
26.	18.22	☾ θ ♒

APRIL 1791.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Asc. in Time.	Sun's Declin. North.	Equat. of Time Add.	Diff.
		S. D.M. S.	H. M. S.	D. M. S.	M. S.	S.
1	F.	0. 11.42.25	0. 43. 3,0	4.38. 3	3.54,6	18,2
2	Sa.	0. 12.41.30	0. 46.41,3	5. 1. 7	3.36,4	18,0
3	*Su.*	0. 13.40.33	0. 50.19,8	5.24. 6	3.18,4	17,9
4	M.	0. 14.39.33	0. 53.58,4	5.46.59	3. 0,5	17,7
5	Tu.	0. 15.38.32	0. 57.37,2	6. 9.47	2.42,8	17,6
6	W.	0. 16.37.29	1. 1.16,1	6.32.28	2.25,2	17,3
7	Th.	0. 17.36.23	1. 4.55,3	6.55. 2	2. 7,9	17,2
8	F.	0. 18.35.15	1. 8.34,6	7.17.29	1.50,7	16,9
9	Sa.	0. 19.34. 5	1. 12.14,2	7.39.49	1.33,8	16,7
10	*Su.*	0. 20.32.52	1. 15.54,0	8. 2. 1	1.17,1	16,4
11	M.	0. 21.31.37	1. 19.34,1	8.24. 4	1. 0,7	16,2
12	Tu.	0. 22.30.20	1. 23.14,4	8.45.59	0.44,5	15,9
13	W.	0. 23.29. 0	1. 26.55,1	9. 7.46	0.28,6	15,6
14	Th.	0. 24.27.38	1. 30.36,0	9.29.23	0.13,0	15,2
15	F.	0. 25.26.14	1. 34.17,2	9.50.50	Sub. 2,2	14,9
16	Sa.	0. 26.24.48	1. 37.58,9	10.12. 8	0.17,1	14,6
17	*Su.*	0. 27.23.20	1. 41.40,8	10.33.16	0.31,7	14,2
18	M.	0. 28.21.49	1. 45.23,2	10.54.13	0.45,9	13,8
19	Tu.	0. 29.20.17	1. 49. 5,9	11.14.59	0.59,7	13,3
20	W.	1. 0.18.44	1. 52.49,1	11.35.35	1.13,0	12,9
21	Th.	1. 1.17. 8	1. 56.32,7	11.55.59	1.25,9	12,5
22	F.	1. 2.15.31	2. 0.16,7	12.16.12	1.38,4	12,0
23	Sa.	1. 3.13.52	2. 4. 1,3	12.36.12	1.50,4	11,5
24	*Su.*	1. 4.12.12	2. 7.46,3	12.56. 1	2. 1,9	11,0
25	M.	1. 5.10.30	2. 11.31,8	13.15.37	2.12,9	10,5
26	Tu.	1. 6. 8.47	2. 15.17,8	13.35. 0	2.23,4	10,0
27	W.	1. 7. 7. 2	2. 19. 4,4	13.54.10	2.33,4	9,5
28	Th.	1. 8. 5.16	2. 22.51,4	14.13. 6	2.42,9	8,9
29	F.	1. 9. 3.29	2. 26.39,0	14.31.48	2.51,8	8,4
30	Sa.	1. 10. 1.40	2. 30.27,2	14.50.16	3. 0,2	

Days.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	16. 2,4	1. 4,4	2. 27,7	0. 000180	6. 22. 31
7	16. 0,7	1. 4,5	2. 27,2	0. 000925	6. 22. 12
13	15. 59,1	1. 4,7	2. 26,6	0. 001641	6. 21. 53
19	15. 57,6	1. 5,1	2. 26,1	0. 002350	6. 21. 33
25	15. 56,1	1. 5,5	2. 25,6	0. 003057	6. 21. 14

Eclipſes of the SATELLITES of JUPITER.

I. Satellite. Emerſions.		II. Satellite. Emerſions.		III. Satellite.		
Days	H. M. S.	Days	H. M. S.	Days	H. M. S.	
*2	8. 9. 11	1	21. 30. 7	6	6. 40. 5	I
4	2. 38. 16	*5	10. 48. 51	*6	9. 23. 53	E
5	21. 7. 23	9	0. 7. 37	*13	10. 40. 58	I
*7	15. 36. 28	*12	13. 26. 25	*13	13. 23. 40	E
*9	10. 5. 34	16	2. 45. 12	*20	14. 41. 51	I
11	4. 34. 37	19	16. 3. 56	20	17. 23. 31	E
12	23. 3. 41	23	5. 22. 41	27	18. 42. 19	I
14	17. 32. 43	26	18. 41. 28	27	21. 22. 57	E
*16	12. 1. 46	30	8. 0. 8			
18	6. 30. 47					
20	0. 59. 50					
21	19. 28. 48					
*23	13. 57. 47					
*25	8. 26. 45					
27	2. 55. 41					
28	21. 24. 36					
30	15. 53. 30					

IV. Satellite.		
15	7. 14. 25	I
*15	10. 10. 14	E

APRIL 1791. IV.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Passage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
MERCURY. Sup. ☌ 13^{d}. $13^{h}\frac{1}{2}$.						
1	10. 25. 45	6. 54 S	11. 29. 11	2. 5 S	2. 14 S	23. 20
4	11. 7. 46	6. 30	0. 4. 48	1. 52	0. 12 N	23. 30
7	11. 20. 53	5. 45	0. 10. 38	1. 33	2. 47	23. 40
10	0. 5. 17	4. 34	0. 16. 39	1. 11	5. 28	23. 51
13	0. 21. 1	2. 57	0. 22. 52	0. 44	8. 13	☌
16	1. 8. 4	0. 57 S	0. 29. 12	0. 14 S	10. 59	0. 11
19	1. 26. 14	1. 16 N	1. 5. 34	0. 18 N	13. 41	0. 24
22	2. 15. 4	3. 26	1. 11. 52	0. 51	16. 13	0. 36
25	3. 3. 56	5. 13	1. 17. 56	1. 21	18. 30	0. 49
28	3. 22. 12	6. 25	1. 23. 39	1. 48	20. 27	1. 0
30	4. 3. 47	6. 51	1. 27. 13	2. 3	21. 33	1. 7
VENUS.						
1	2. 3. 52	0. 39 S	1. 3. 14	0. 18 S	12. 20 N	1. 21
7	2. 13. 33	0. 4 S	1. 10. 36	0. 2 S	14. 59	1. 28
13	2. 23. 13	0. 30 N	1. 17. 57	0. 14 N	17. 26	1. 35
19	3. 2. 55	1. 3	1. 25. 15	0. 31	19. 36	1. 42
25	3. 12. 38	1. 35	2. 2. 32	0. 47	21. 28	1. 50
MARS.						
1	0. 2. 47	1. 19 S	0. 6. 30	0. 46 S	1. 53 N	23. 41
7	0. 6. 29	1. 14	0. 11. 7	0. 43	3. 44	23. 36
13	0. 10. 10	1. 8	0. 15. 43	0. 40	5. 35	23. 31
19	0. 13. 50	1. 2	0. 20. 16	0. 37	7. 22	23. 26
25	0. 17. 28	0. 57	0. 24. 49	0. 33	9. 6	23. 20
JUPITER.						
1	5. 27. 50	1. 18 N	5. 24. 46	1. 34 N	3. 32 N	10. 58
7	5. 28. 17	1. 18	5. 24. 4	1. 34	3. 48	10. 34
13	5. 28. 44	1. 18	5. 23. 26	1. 33	4. 2	10. 10
19	5. 29. 11	1. 18	5. 22. 54	1. 32	4. 14	9. 46
25	5. 29. 39	1. 18	5. 22. 26	1. 31	4. 24	9. 21
SATURN.						
1	0. 8. 55	2. 27 S	0. 9. 11	2. 13 S	1. 37 N	23. 51
7	0. 9. 7	2. 27	0. 9. 56	2. 13	1. 54	23. 32
13	0. 9. 20	2. 27	0. 10. 41	2. 13	2. 12	23. 13
19	0. 9. 32	2. 27	0. 11. 25	2. 13	2. 29	22. 53
25	0. 9. 44	2. 27	0. 12. 8	2. 14	2. 45	22. 33

APRIL 1791.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon. S. D. M. S.	Moon's Longitude at Midnight. S. D. M. S.	Moon's Latitude at Noon. D. M. S.	Moon's Latitude at Midn. D. M. S.
1	F.	11. 18.50.49	11. 25. 2.26	2.52.59 N	2.23.17 N
2	Sa.	0. 1.11.14	0. 7.17.30	1.52. 7	1.19.52
3	*Su.*	0. 13.21.21	0. 19.23. 1	0.46.54 N	0.13.35 N
4	M.	0. 25.22.43	1. 1.20.41	0.19.42 S	0.52.38 S
5	Tu.	1. 7.17.10	1. 13.12.30	1.24.51	1.56. 3
6	W.	1. 19. 6.58	1. 25. 0.57	2.25.57	2.54.14
7	Th.	2. 0.54.53	2. 6.49. 7	3.20.38	3.44.56
8	F.	2. 12.44.10	2. 18.40.29	4. 6.53	4.26.15
9	Sa.	2. 24.38.36	3. 0.39. 1	4.42.51	4.56.27
10	*Su.*	3. 6.42.18	3. 12.48.59	5. 6.53	5.13.58
11	M.	3. 18.59.38	3. 25.14.46	5.17.30	5.17.21
12	Tu.	4. 1.34.55	4. 8. 0.34	5.13.23	5. 5.27
13	W.	4. 14.32. 6	4. 21. 9.55	4.53.29	4.37.26
14	Th.	4. 27.54.17	5. 4.45.21	4.17.20	3.53.15
15	F.	5. 11.43. 7	5. 18.47.31	3.25.21	2.53.53
16	Sa.	5. 25.58.12	6. 3.14.46	2.19.13	1.41.49
17	*Su.*	6. 10.36.36	6. 18. 2.53	1. 2.18 S	0.21.20 S
18	M.	6. 25.32.45	7. 3. 5. 7	0.20.20 N	1. 1.51 N
19	Tu.	7. 10.38.52	7. 18.12.51	1.42.25	2.21. 9
20	W.	7. 25.45.55	8. 3.16.56	2.57.20	3.30.15
21	Th.	8. 10.44.53	8. 18. 8.52	3.59.19	4.24. 8
22	F.	8. 25.28. 5	9. 2.41.59	4.44.19	4.59.42
23	Sa.	9. 9.50. 5	9. 16.52. 8	5.10.14	5.15.55
24	*Su.*	9. 23.47.59	10. 0.37.38	5.16.54	5.13.22
25	M.	10. 7.21.15	10. 13.59. 0	5. 5.34	4.53.46
26	Tu.	10. 20.31.12	10. 26.58.13	4.38.19	4.19.30
27	W.	11. 3.20.24	11. 9.38.15	3.57.43	3.33.17
28	Th.	11. 15.52. 3	11. 22. 2.20	3. 6.33	2.37.55
29	F.	11. 28. 9.29	0. 4.13.54	2. 7.41	1.36.14
30	Sa.	0. 10.15.55	0. 16.15.57	1. 3.56	0.31. 6

APRIL 1791. VI.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſſage over Merid.	☽'s Right Aſcenſion at Noon.	☽'s Right Aſcenſ. at Midn.	☽'s Declination at Noon.	☽'s Declinatio at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	F.	29	23. 13	348. 37	354.30	1.46 S	0.13 N
2	Sa.	30	23. 58	0. 21	6.10	2.11 N	4. 7
3	*Su.*	1	☌	11. 59	17.48	6. 0	7.48
4	M.	2	0. 42	23. 38	29.30	9.31	11. 8
5	Tu.	3	1. 27	35. 24	41.21	12.37	13.58
6	W.	4	2. 12	47. 21	53.23	15.11	16.14
7	Th.	5	2. 59	59. 29	65.38	17. 6	17.47
8	F.	6	3. 46	71. 50	78. 5	18.16	18.33
9	Sa.	7	4. 34	84. 22	90.41	18.38	18.31
10	*Su.*	8	5. 23	97. 2	103.24	18.11	17.38
11	M.	9	6. 12	109. 47	116.12	16.53	15.55
12	Tu.	10	7. 1	122. 38	129. 5	14.44	13.21
13	W.	11	7. 51	135. 33	142. 3	11.48	10. 4
14	Th.	12	8. 42	148. 36	155.11	8.11	6. 9
15	F.	13	9. 33	161. 50	168.34	4. 0 N	1.46 N
16	Sa.	14	10. 26	175. 23	182.18	0.32 S	2.51 S
17	*Su.*	15	11. 21	189. 20	196.30	5. 9	7.25
18	M.	16	12. 18	203. 48	211.13	9.35	11.35
19	Tu.	17	13. 18	218. 46	226.25	13.24	15. 0
20	W.	18	14. 19	234. 10	241.57	16.21	17.24
21	Th.	19	15. 20	249. 45	257.31	18. 8	18.33
22	F.	20	16. 19	265. 14	272.50	18.39	18.27
23	Sa.	21	17. 16	280. 18	287.36	17.57	17.11
24	*Su.*	22	18. 10	294. 44	301.40	16.10	14.56
25	M.	23	19. 0	308. 26	315. 1	13.32	11.58
26	Tu.	24	19. 48	321. 26	327.42	10.16	8.28
27	W.	25	20. 34	333. 50	339.51	6.36	4.40
28	Th.	26	21. 18	345. 47	351.39	2.43 S	0.45 S
29	F.	27	22. 2	357. 28	3.15	1.13 N	3. 9 N
30	Sa.	28	22. 46	9. 1	14.47	5. 3	6.53

APRIL 1791.

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	F.	15. 8	15. 4	55. 32	55. 19	5107	5124
2	Sa.	15. 1	14. 58	55. 8	54. 57	5138	5153
3	*Su.*	14. 56	14. 53	54. 47	54. 38	5166	5178
4	M.	14. 51	14. 49	54. 30	54. 23	5189	5198
5	Tu.	14. 48	14. 47	54. 18	54. 14	5205	5210
6	W.	14. 46	14. 46	54. 11	54. 10	5214	5215
7	Th.	14. 46	14. 47	54. 11	54. 14	5214	5210
8	F.	14. 48	14. 50	54. 19	54. 26	5203	5194
9	Sa.	14. 52	14. 56	54. 35	54. 47	5182	5166
10	*Su.*	15. 0	15. 4	55. 2	55. 19	5146	5124
11	M.	15. 10	15. 16	55. 38	56. 0	5099	5071
12	Tu.	15. 22	15. 29	56. 23	56. 48	5041	5009
13	W.	15. 36	15. 44	57. 15	57. 43	4975	4940
14	Th.	15. 51	15. 59	58. 11	58. 40	4905	4869
15	F.	16. 7	16. 14	59. 8	59. 35	4834	4801
16	Sa.	16. 21	16. 28	60. 1	60. 24	4770	4742
17	*Su.*	16. 33	16. 37	60. 44	61. 0	4718	4699
18	M.	16. 41	16. 43	61. 12	61. 19	4685	4677
19	Tu.	16. 43	16. 43	61. 22	61. 20	4673	4676
20	W.	16. 41	16. 38	61. 13	61. 2	4684	4697
21	Th.	16. 34	16. 28	60. 47	60. 29	4715	4736
22	F.	16. 23	16. 17	60. 9	59. 46	4760	4788
23	Sa.	16. 11	16. 4	59. 22	58. 57	4817	4848
24	*Su.*	15. 57	15. 50	58. 31	58. 5	4880	4912
25	M.	15. 43	15. 37	57. 41	57. 17	4942	4972
26	Tu.	15. 30	15. 24	56. 54	56. 32	5002	5029
27	W.	15. 19	15. 14	56. 12	55. 53	5055	5080
28	Th.	15. 9	15. 5	55. 36	55. 21	5102	5122
29	F.	15. 1	14. 58	55. 6	54. 54	5141	5157
30	Sa.	14. 55	14. 52	54. 43	54. 33	5171	5185

Diſtances of ☽'s Center from Sun, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
5	Pollux.	73. 21. 15	71. 54. 7	70. 27. 6	69. 0. 13	67. 33. 27	66. 6. 46	64. 40. 14	63. 13. 47
6		61. 47. 29	60. 21. 16	58. 55. 10	57. 29. 11	56. 3. 19	54. 37. 33	53. 11. 55	51. 46. 25
7		50. 21. 2	48. 55. 47	47. 30. 42	46. 5. 46	44. 40. 59	43. 16. 23	41. 51. 58	40. 27. 45
8		39. 3. 44							
8	Regulus.	74. 16. 36	72. 48. 5	71. 19. 31	69. 50. 51	68. 22. 8	66. 53. 19	65. 24. 25	63. 55. 24
9		62. 26. 17	60. 57. 3	59. 27. 42	57. 58. 12	56. 28. 35	54. 58. 49	53. 28. 52	51. 58. 47
10		50. 28. 31	48. 58. 5	47. 27. 27	45. 56. 38	44. 25. 38	42. 54. 25	41. 22. 59	39. 51. 21
11		38. 19. 30	36. 47. 25	35. 15. 8	33. 42. 38	32. 9. 56	30. 36. 58	29. 3. 50	27. 30. 32
12		25. 57. 4	24. 23. 28	22. 49. 46	21. 15. 58	19. 42. 5			
12	Spica ♍					72. 49. 14	71. 12. 20	69. 35. 3	67. 57. 21
13		66. 19. 16	64. 40. 46	63. 1. 51	61. 22. 32	59. 42. 47	58. 2. 36	56. 22. 0	54. 40. 57
14		52. 59. 29	51. 17. 34	49. 35. 12	47. 52. 24	46. 9. 10	44. 25. 29	42. 41. 22	40. 56. 40
15		39. 11. 50	37. 26. 24	35. 40. 33	33. 54. 18	32. 7. 38	30. 20. 33	28. 33. 6	26. 45. 18
16		24. 57. 7	23. 8. 35	21. 19. 46	19. 30. 38	17. 41. 10			
16	Antares.					63. 33. 45	61. 44. 49	59. 55. 39	58. 6. 11
17		56. 16. 28	54. 26. 31	52. 36. 26	50. 46. 10	48. 55. 46	47. 5. 13	45. 14. 38	43. 24. 2
18		41. 33. 24	39. 42. 46	37. 52. 17	36. 2. 0	34. 11. 55	32. 22. 9	30. 32. 46	28. 43. 48
19		26. 55. 20							

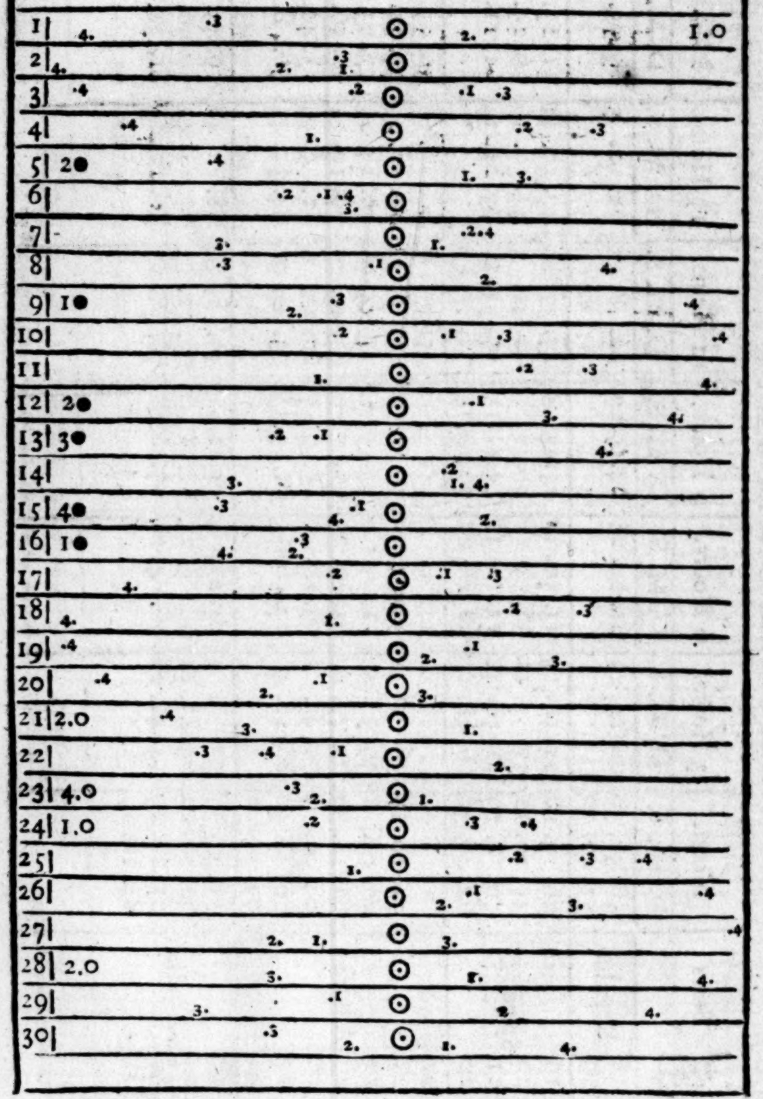
Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
19	α Aquilæ.	78. 51. 56	77. 8. 25	75. 25. 3	73.41.54	71. 59. 1	70. 16. 24	68. 34. 11	66.52.21
20		65. 10. 57	63. 29. 59	61. 49. 38	60. 9.51	58. 30. 43	56. 52. 20	55. 14. 42	53.37.54
21		52. 1. 59							
21	α Pegasi.	97. 54. 19	96. 7. 41	94. 21. 20	92.35.14	90. 49. 27	89. 3. 57	87. 18. 48	85.33.59
22		83. 49. 31	82. 5. 25	80. 21. 43	78.38.26	76. 55. 32	75. 13. 4	73. 31. 3	71.49.30
23		70. 8. 24	68. 27. 47	66. 47. 40	65. 8. 3	63. 28. 57	61. 50. 22	60. 12. 21	58.34.54
24		56. 58. 1	55. 21. 43	53. 46. 3	52.11. 1	50. 36. 38	49. 2. 56	47. 29. 56	45.57.40
25		44. 26. 8							
22	The Sun.					119. 55. 10	118. 15. 14	116. 35. 41	114.56.31
23		113. 17. 44	111. 39. 20	110. 1. 20	108.23.43	106. 46. 30	105. 9. 40	103. 33. 14	101.57.11
24		100. 21. 32	98. 46. 15	97. 11. 22	95.36.50	94. 2. 42	92. 28. 55	90. 55. 31	89.22.27
25		87. 49. 46	86. 17. 25	84. 45. 26	83.13.46	81. 42. 28	80. 11. 29	78. 40. 50	77.10.29
26		75. 40. 28	74. 10. 45	72. 41. 18	71.12.10	69. 43. 19	68. 14. 46	66. 46. 29	65.18.27
27		63. 50. 42	62. 23. 10	60. 55. 52	59.28.49	58. 2. 1	56. 35. 28	55. 9. 8	53.43. 1
28		52. 17. 8	50. 51. 26	49. 25. 55	48. 0.36	46. 35. 29	45. 10. 33	43. 45. 47	42.21.11
29		40. 56. 45	39. 32. 29						

Diſtances of ☽'s Center from Sun, and from Stars weſt of her.

Days.	Stars Names.	Noon. D. M. S.	3 Hours. D. M. S.	6 Hours. D. M. S.	9 Hours. D. M. S.	12 Hours. D. M. S.	15 Hours. D. M. S.	18 Hours. D. M. S.	21 Hours. D. M. S.
1	α Aquilæ.	54. 15. 19	55. 36. 19	56. 57. 31	58.18.56	59. 40. 37			
6	The Sun.					37. 59. 40	39. 20. 56	40. 42. 12	42. 3.27
7		43. 24. 42	44. 45. 57	46. 7. 12	47.28.29	48. 49. 46	50. 11. 5	51. 32. 27	52.53.52
8		54. 15. 19	55. 36. 50	56. 58. 26	58.20. 6	59. 41. 51	61. 3. 42	62. 25. 40	63.47.45
9		65. 9. 56	66. 32. 15	67. 54. 42	69.17.18	70. 40. 3	72. 2. 58	73. 26. 4	74.49.21
10		76. 12. 49	77. 36. 29	79. 0. 22	80.24.29	81. 48. 49	83. 13. 24	84. 38. 13	86. 3.19
11		87. 28. 40	88. 54. 18	90. 20. 13	91.46.27	93. 12. 58	94. 39. 48	96. 6. 58	97.34.28
12		99. 2. 18	100. 30. 30	101. 59. 3	103.27.59	104. 57. 16	106. 26. 56	107. 56. 59	109.27.26
13		110. 58. 17	112. 29. 33	114. 1. 14	115.33.20	117. 5. 51	118. 38. 48	120. 12. 12	
11	Aldebaran.	41. 55. 41	43. 28. 32	45. 1. 41	46.35. 8	48. 8. 53	49. 42. 57	51. 17. 21	52.52. 6
12		54. 27. 10	56. 2. 36	57. 38. 24	59.14.34	60. 51. 6	62. 28. 0	64. 5. 18	65.42.59
13		67. 21. 5	68. 59. 35	70. 38. 31	72.17.53	73. 57. 41			
13	Pollux.					32. 46. 19	34. 19. 20	35. 53. 13	37.28. 0
14		39. 3. 43	40. 40. 15	42. 17. 31	43.55.33	45. 34. 21	47. 13. 48	48. 53. 54	50.34.38
15		52. 16. 1	53. 58. 1	55. 40. 33	57.23.38	59. 7. 18			
15	Regulus.					22. 6. 15	23. 51. 8	25. 36. 37	27.22.46
16		29. 9. 35	30. 56. 58	32. 44. 51	34.33.15	36. 22. 10	38. 11. 31	40. 1. 13	41.51.20
17		43. 41. 51	45. 32. 43	47. 23. 51	49.15.19	51. 7. 5	52. 59. 7	54. 51. 21	56.43.49

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
18	Regulus.	58. 36. 30	60. 29. 21	62. 22. 20	64.15.27	66. 8. 42	68. 2. 3	69. 55. 25	71.48.50
19		73. 42. 20							
19	Spica ♍	20. 3. 28	21. 56. 53	23. 50. 18	25.43.44	27. 37. 10	29. 30. 34	31. 23. 52	33.17. 4
20		35. 10. 12	37. 3. 11	38. 55. 58	40.48.35	42. 41. 2	44. 33. 16	46. 25. 14	48.16.59
21		50. 8. 29	51. 59. 42	53. 50. 38	55.41.15	57. 31. 35	59. 21. 34	61. 11. 14	63. 0.33
22		64. 49. 32	66. 38. 10	68. 26. 25	70.14.19	72. 1. 51			
22	Antares.					27. 31. 0	29. 13. 18	30. 55. 36	32.37.55
23		34. 20. 18	36. 2. 38	37. 44. 48	39.26.50	41. 8. 47	42. 50. 27	44. 31. 52	46.13. 3
24		47. 54. 1	49. 34. 40	51. 15. 2	52.55. 8	54. 34. 56	56. 14. 26	57. 53. 39	59.32.33
25		61. 11. 9	62. 49. 26	64. 27. 25	66. 5. 6	67. 42. 29	69. 19. 34	70. 56. 22	72.32.52
26		74. 9. 5	75. 45. 1	77. 20. 40	78.56. 3	80. 31. 9	82. 5. 59	83. 40. 33	85.14.52
27		86. 48. 56	88. 22. 46	89. 56. 21	91.29.43	93. 2. 50	94. 35. 43	96. 8. 23	97.40.49
28		99. 13. 2							
28	α Aqullæ.	51. 41. 17	53. 1. 3	54. 21. 4	55.41.22	57. 1.58	58. 22. 48	59. 43. 48	61. 4.59
29		62. 26. 22	63. 47. 52	65. 9. 25	66.31. 6	67. 52. 54	69. 14. 44	70. 36. 36	71.58.31
30		73. 20. 29	74. 42. 28	76. 4. 28	77.26.28	78. 48. 29	80. 10. 29	81. 32. 27	82.54.23
M1		84. 16. 17							

Configurations of the SATELLITES of JUPITER at Ten o'Clock at Night.



MAY 1791.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	*Su.*	*1ſt Su. aft. Eaſt. St. Phil.*
2	M.	*[and St. James.*
3	Tu.	Invention of the Croſs.
4	W.	Oxf. and Camb. Terms
5	Th.	begin.
6	F.	John Ev. ante Port Lat.
7	Sa.	
8	*Su.*	*2d Sunday after Eaſter.*
9	M.	In 15 days after Eaſter
10	Tu.	[1 ret.
11	W.	Eaſter Term begins.
12	Th.	
13	F.	
14	Sa.	
15	*Su.*	*3d Sunday after Eaſter.*
16	M.	In 3 weeks after Eaſter
17	Tu.	[2 ret.
18	W.	
19	Th.	*Q. Ch. born.* 1744. Dunſt.
20	F.	
21	Sa.	
22	*Su.*	*4th S. aft. Eaſt. Prs Eliz. b.*
23	M.	From Eaſt. in 1 m. 3 ret.
24	Tu.	
25	W.	
26	Th.	Auguſtin 1ſt Abp. Cant.
27	F.	Venerable Bede.
28	Sa.	*[reſtored.*
29	*Su.*	*5th Su. aft. Eaſt.* K. Ch. II.
30	M.	From Eaſter in 5 weeks
31	Tu.	[4 ret.

Phaſes of the Moon.

	D. H. M.
New Moon —	2. 17. 20
Firſt Quarter —	10. 18. 46
Full Moon —	17. 12. 44
Laſt Quarter —	24. 6. 30

Other Phenomena.

D.H.M.	
1.15.15	☾ ♂
9.23.37	☾ 1 ad α ♋
10. 0.37	☾ 2 ad α ♋
5.22	☾ κ ♋
20.26	☾ ο ♌
11. 5.43	☾ π ♌
13.	♀ 132 ♉ diff.
3.20	☾ υ ♌ [Lat. 24′.
16. 0.32	☾ λ ♍
17. 5. 8	☾ 4 ad ζ ♎
12.45	☾ θ ♎
18.	♃ Stationary.
20.16.54	☉ enters ♊
21.20.44	☾ β ♑ [12′.
23.	♀ ε ♊ diff. Lat.
24.	☿ Stationary.
0.47	☾ θ ♒
27.14.32	☾ ι ♓
19.13	☾ ζ ♓

MAY 1791.

II.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Afc. in Time.	Sun's Declin. North.	Equat. of Time. Sub.	Diff.
		S. D. M. S.	H. M. S.	D.M.S.	M. S.	S.
1	*Su.*	1. 10.59.49	2. 34.15,9	15. 8.30	3. 8,0	7,3
2	M.	1. 11.57.57	2. 38. 5,1	15.26.29	3. 15,3	6,7
3	Tu.	1. 12.56. 4	2. 41.54,9	15.44.12	3. 22,0	6,2
4	W.	1. 13.54. 9	2. 45.45,3	16. 1.40	3. 28,2	5,6
5	Th.	1. 14.52.12	2. 49.36,2	16.18.52	3. 33,8	5,0
6	F.	1. 15.50.13	2. 53.27,7	16.35.47	3. 38,8	4,5
7	Sa.	1. 16.48.12	2. 57.19,7	16.52.26	3. 43,3	4,0
8	*Su.*	1. 17.46.10	3. 1.12,3	17. 8.49	3. 47,3	3,5
9	M.	1. 18.44. 6	3. 5. 5,4	17.24.54	3. 50,8	2,9
10	Tu.	1. 19.42. 0	3. 8.59,1	17.40.41	3. 53,7	2,3
11	W.	1. 20.39.52	3. 12.53,3	17.56.10	3. 56,0	1,7
12	Th.	1. 21.37.42	3. 16.48,1	18.11.22	3. 57,7	1,2
13	F.	1. 22.35.30	3. 20.43,4	18.26.16	3. 58,9	0,7
14	Sa.	1. 23.33.17	3. 24.39,3	18.40.51	3. 59,6	0,1
15	*Su.*	1. 24.31. 2	3. 28.35,8	18.55. 7	3. 59,7	0,5
16	M.	1. 25.28.45	3. 32.32,8	19. 9. 4	3. 59,2	1,1
17	Tu.	1. 26.26.27	3. 36.30,4	19.22.41	3. 58,1	1,6
18	W.	1. 27.24. 8	3. 40.28,6	19.35.59	3. 56,5	2,1
19	Th.	1. 28.21.48	3. 44.27,3	19.48.57	3. 54,4	2,7
20	F.	1. 29.19.26	3. 48.26,5	20. 1.35	3. 51,7	3,2
21	Sa.	2. 0.17. 3	3. 52.26,3	20.13.52	3. 48,5	3,8
22	*Su.*	2. 1.14.39	3. 56.26,7	20.25.48	3. 44,7	4,4
23	M.	2. 2.12.14	4. 0.27,6	20.37.24	3. 40,3	4,9
24	Tu.	2. 3. 9.49	4. 4.29,1	20.48.39	3. 35,4	5,5
25	W.	2. 4. 7.23	4. 8.31,2	20.59.33	3. 29,9	6,0
26	Th.	2. 5. 4.56	4. 12.33,8	21.10. 5	3. 23,9	6,5
27	F.	2. 6. 2.28	4. 16.36,9	21.20.15	3. 17,4	7,0
28	Sa.	2. 7. 0. 0	4. 20.40,5	21.30. 3	3. 10,4	7,5
29	*Su.*	2. 7.57.31	4. 24.44,5	21.39.29	3. 2,9	7,9
30	M.	2. 8.55. 1	4. 28.49,0	21.48.32	2. 55,0	8,4
31	Tu.	2. 9.52.30	4. 32.53,9	21.57.13	2. 46,6	

Days.	Semidiameter of the Sun.	Time of D^{o} paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	15. 54,6	1. 5,9	2. 25,3	0. 003727	6. 20. 55
7	15. 53,2	1. 6,4	2. 24,9	0. 004338	6. 20. 36
13	15. 52,0	1. 6,9	2. 24,6	0. 004885	6. 20. 17
19	15. 50,9	1. 7,4	2. 24,2	0. 005396	6. 19. 58
25	15. 49,8	1. 7,8	2. 23,9	0. 005872	6. 19. 39

Eclipses of the Satellites of JUPITER.

I. Satellite. Emerſions.		II. Satellite. Emerſions.		III. Satellite.		
Days	H. M. S.	Days	H. M. S.	Days	H. M. S.	
*2	10. 22. 21	3	21. 18. 49	4	22. 42. 35	I
4	4. 51. 12	*7	10. 37. 22	5	1. 22. 18	E
5	23. 19. 58	10	23. 55. 49	12	2. 42. 13	I
7	17. 48. 44	*14	13. 14. 12	12	5. 20. 54	E
*9	12. 17. 30	18	2. 32. 31	19	6. 41. 22	I
11	6. 46. 12	21	15. 50. 44	*19	9. 19. 2	E
13	1. 14. 53	25	5. 8. 52	*26	10. 40. 3	I
14	19. 43. 33	28	18. 26. 56	26	13. 16. 42	E
16	14. 12. 10			IV. Satellite.		
18	8. 40. 45			2	1. 18. 51	I
20	3. 9. 19			2	4. 7. 14	E
21	21. 37. 52			18	19. 20. 48	I
23	16. 6. 23			18	22. 1. 4	E
*25	10. 34. 51					
27	5. 3. 18					
28	23. 31. 42					
30	18. 0. 6					

MAY 1791. IV.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
MERCURY. Gr. Elong. 12^{d}.						
1	4. 9. 21	6. 57 N	1. 28. 55	2. 9 N	22. 2 N	1. 11
4	4. 25. 8	6. 55	2. 3. 38	2. 23	23. 15	1. 19
7	5. 9. 28	6. 25	2. 7. 47	2. 30	24. 6	1. 25
10	5. 22. 28	5. 38	2. 11. 20	2. 28	24. 37	1. 29
13	6. 4. 19	4. 39	2. 14. 14	2. 18	24. 49	1. 30
16	6. 15. 12	3. 35	2. 16. 28	1. 59	24. 45	1. 28
19	6. 25. 18	2. 28	2. 18. 1	1. 31	24. 27	1. 23
22	7. 4. 46	1. 21	2. 18. 50	0. 55	23. 55	1. 15
25	7. 13. 46	0. 15 N	2. 18. 58	0. 11 N	23. 12	1. 4
28	7. 22. 26	0. 48 S	2. 18. 26	0. 38 S	22. 20	0. 50
31	8. 0. 50	1. 49	2. 17. 19	1. 30	21. 22	0. 32
VENUS.						
1	3. 22. 22	2. 4 N	2. 9. 47	1. 3 N	22. 59 N	1. 58
7	4. 2. 7	2. 30	2. 17. 1	1. 18	24. 7	2. 6
13	4. 11. 52	2. 51	2. 24. 13	1. 31	24. 51	2. 14
19	4. 21. 37	3. 7	3. 1. 22	1. 43	25. 10	2. 22
25	5. 1. 23	3. 18	3. 8. 29	1. 52	25. 3	2. 29
MARS.						
1	0. 21. 4	0. 50 S	0. 29. 19	0. 30 S	10. 46 N	23. 15
7	0. 24. 38	0. 44	1. 3. 48	0. 26	12. 22	23. 9
13	0. 28. 11	0. 38	1. 8. 14	0. 23	13. 54	23. 2
19	1. 1. 41	0. 31	1. 12. 39	0. 19	15. 21	22. 56
25	1. 5. 10	0. 25	1. 17. 2	0. 15	16. 42	22. 49
JUPITER.						
1	6. 0. 6	1. 18 N	5. 22. 5	1. 31 N	4. 32 N	8. 58
7	6. 0. 34	1. 18	5. 21. 50	1. 30	4. 37	8. 34
13	6. 1. 1	1. 18	5. 21. 41	1. 28	4. 40	8. 10
19	6. 1. 28	1. 19	5. 21. 38	1. 27	4. 39	7. 46
25	6. 1. 55	1. 19	5. 21. 43	1. 26	4. 36	7. 22
SATURN.						
1	0. 9. 57	2. 27 S	0. 12. 50	2. 15 S	3. 1 N	22. 13
7	0. 10. 9	2. 27	0. 13. 31	2. 15	3. 16	21. 53
13	0. 10. 21	2. 27	0. 14. 11	2. 16	3. 30	21. 32
19	0. 10. 34	2. 27	0. 14. 49	2. 17	3. 44	21. 11
25	0. 10. 46	2. 28	0. 15. 25	2. 18	3. 57	20. 49

V. MAY 1791.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	*Su.*	0. 22.14.18	0. 28.11.15	0. 1.54 S	0.34.43 S
2	M.	1. 4. 7. 9	1. 10. 2.13	1. 7. 3	1.38.33
3	Tu.	1. 15.56.44	1. 21.50.59	2. 8.55	2.37.51
4	W.	1. 27.45.11	2. 3.39.38	3. 5. 3	3.30.17
5	Th.	2. 9.34.35	2. 15.30.19	3.53.15	4.13.44
6	F.	2. 21.27. 8	2. 27.25.22	4.31.33	4.46.27
7	Sa.	3. 3.25.20	3. 9.27.26	4.58.18	5. 6.56
8	*Su.*	3. 15.32. 1	3. 21.39.34	5.12.10	5.13.53
9	M.	3. 27.50.26	4. 4. 5. 9	5.12. 1	5. 6.25
10	Tu.	4. 10.24. 6	4. 16.47.48	4.57. 6	4.43.59
11	W.	4. 23.16.39	4. 29.51. 5	4.27. 5	4. 6.27
12	Th.	5. 6.31.29	5. 13.18. 8	3.42.11	3.14.28
13	F.	5. 20.11.16	5. 27.11. 2	2.43.29	2. 9.38
14	Sa.	6. 4.17.24	6. 11.30. 8	1.33.13	0.54.49 S
15	*Su.*	6. 18.48.58	6. 26.13.20	0.14.59 S	0.25.33 N
16	M.	7. 3.42.29	7. 11.15.37	1. 6. 4 N	1.45.43
17	Tu.	7. 18.51.36	7. 26.29.14	2.23.42	2.59.12
18	W.	8. 4. 7.14	8. 11.44.18	3.31.30	3.59.55
19	Th.	8. 19.19. 4	8. 26.50.22	4.23.58	4.43.13
20	F.	9. 4.17. 6	9. 11.38.20	4.57.27	5. 6.36
21	Sa.	9. 18.53.18	9. 26. 1.30	5.10.38	5. 9.48
22	*Su.*	10. 3. 2.35	10. 9.56.24	5. 4.17	4.54.24
23	M.	10. 16.43. 4	10. 23.22.44	4.40.34	4.23. 8
24	Tu.	10. 29.55.43	11. 6.22.28	4. 2.30	3.39. 8
25	W.	11. 12.43.27	11. 18.59.14	3.13.21	2.45.34
26	Th.	11. 25.10.24	0. 1.17.30	2.16.13	1.45.35
27	F.	0. 7.21.10	0. 13.21.56	1.14. 5	0.42. 0 N
28	Sa.	0. 19.20.21	0. 25.16.57	0. 9.43 N	0.22.30 S
29	*Su.*	1. 1.12.12	1. 7. 6.34	0.54.19 S	1.25.25
30	M.	1. 13. 0.28	1. 18.54.13	1.55.31	2.24.19
31	Tu.	1. 24.48.14	2. 0.42.43	2.51.33	3.16.56

MAY 1791.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Passage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſcen. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	*Su.*	29	23. 29	20. 34	26. 23	8. 38 N	10. 18 N
2	M.	1	☌	32. 15	38. 9	11. 51	13. 17
3	Tu.	2	0. 15	44. 7	50. 8	14. 34	15. 42
4	W.	3	1. 1	56. 12	62. 20	16. 40	17. 27
5	Th.	4	1. 48	68. 31	74. 44	18. 4	18. 28
6	F.	5	2. 36	81. 0	87. 18	18. 40	18. 40
7	Sa.	6	3. 24	93. 36	99. 55	18. 27	18. 1
8	*Su.*	7	4. 12	106. 14	112. 33	17. 23	16. 33
9	M.	8	5. 0	118. 52	125. 10	15. 31	14. 17
10	Tu.	9	5. 48	131. 29	137. 48	12. 53	11. 18
11	W.	10	6. 37	144. 8	150. 30	9. 34	7. 41
12	Th.	11	7. 26	156. 54	163. 22	5. 41	3. 34 N
13	F.	12	8. 16	169. 55	176. 33	1. 23 N	0. 52 S
14	Sa.	13	9. 8	183. 19	190. 13	3. 8 S	5. 24
15	*Su.*	14	10. 3	197. 16	204. 28	7. 37	9. 45
16	M.	15	11. 1	211. 51	219. 23	11. 44	13. 33
17	Tu.	16	12. 1	227. 5	234. 54	15. 9	16. 29
18	W.	17	13. 3	242. 49	250. 47	17. 32	18. 16
19	Th.	18	14. 5	258. 45	266. 40	18. 39	18. 43
20	F.	19	15. 5	274. 30	282. 11	18. 27	17. 52
21	Sa.	20	16. 2	289. 42	297. 1	17. 0	15. 53
22	*Su.*	21	16. 55	304. 8	311. 2	14. 33	13. 3
23	M.	22	17. 45	317. 44	324. 15	11. 23	9. 36
24	Tu.	23	18. 32	330. 35	336. 47	7. 43	5. 47
25	W.	24	19. 18	342. 50	348. 48	3. 48 S	1. 49 S
26	Th.	25	20. 2	354. 40	0. 29	0. 10 N	2. 8 N
27	F.	26	20. 45	6. 16	12. 2	4. 3	5. 55
28	Sa.	27	21. 29	17. 47	23. 34	7. 43	9. 26
29	*Su.*	28	22. 13	29. 23	35. 14	11. 3	12. 33
30	M.	29	22. 58	41. 9	47. 7	13. 55	15. 9
31	Tu.	30	23. 44	53. 10	59. 16	16. 13	17. 7

MAY 1791.

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid^{r}. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	*Su.*	14. 50	14. 48	54. 26	54. 19	5194	5203
2	M.	14. 47	14. 46	54. 14	54. 10	5210	5215
3	Tu.	14. 45	14. 44	54. 7	54. 5	5219	5222
4	W.	14. 44	14. 44	54. 5	54. 6	5222	5221
5	Th.	14. 45	14. 47	54. 9	54. 14	5217	5210
6	F.	14. 48	14. 50	54. 20	54. 27	5202	5193
7	Sa.	14. 53	14. 56	54. 36	54. 47	5181	5166
8	*Su.*	15. 0	15. 4	55. 1	55. 17	5148	5127
9	M.	15. 9	15. 14	55. 35	55. 54	5103	5079
10	Tu.	15. 20	15. 27	56. 16	56. 40	5050	5019
11	W.	15. 33	15. 40	57. 4	57. 30	4989	4956
12	Th.	15. 48	15. 55	57. 58	58. 26	4921	4886
13	F.	16. 3	16. 11	58. 54	59. 22	4852	4817
14	Sa.	16. 18	16. 25	59. 49	60. 15	4784	4753
15	*Su.*	16. 31	16. 36	60. 38	60. 57	4725	4703
16	M.	16. 41	16. 44	61. 13	61. 24	4684	4671
17	Tu.	16. 46	16. 47	61. 31	61. 34	4663	4659
18	W.	16. 46	16. 44	61. 31	61. 23	4663	4672
19	Th.	16. 40	16. 35	61. 10	60. 53	4687	4708
20	F.	16. 30	16. 24	60. 33	60. 10	4732	4759
21	Sa.	16. 17	16. 9	59. 44	59. 17	4790	4823
22	*Su.*	16. 2	15. 54	58. 49	58. 20	4858	4893
23	M.	15. 46	15. 38	57. 51	57. 24	4930	4964
24	Tu.	15. 31	15. 25	56. 58	56. 33	4996	5028
25	W.	15. 18	15. 12	56. 10	55. 48	5058	5086
26	Th.	15. 7	15. 2	55. 29	55. 12	5111	5133
27	F.	14. 58	14. 55	54. 57	54. 44	5153	5170
28	Sa.	14. 52	14. 49	54. 33	54. 24	5185	5197
29	*Su.*	14. 48	14. 46	54. 17	54. 11	5206	5214
30	M.	14. 45	14. 45	54. 8	54. 6	5218	5221
31	Tu.	14. 44	14. 45	54. 5	54. 6	5222	5221

Diſtances of ☽'s Center from Sun, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
4	Regulus.					83. 18. 56	81. 50. 32	80. 22. 7	78. 53. 40
5		77. 25. 13	75. 56. 44	74. 28. 13	72. 59. 40	71. 31. 5	70. 2. 28	68. 33. 47	67. 5. 4
6		65. 36. 17	64. 7. 27	62. 38. 32	61. 9. 33	59. 40. 29	58. 11. 21	56. 42. 7	55. 12. 47
7		53. 43. 22	52. 13. 51	50. 44. 13	49. 14. 29	47. 44. 38	46. 14. 40	44. 44. 34	43. 14. 20
8		41. 43. 59	40. 13. 29	38. 42. 50	37. 12. 4	35. 41. 9	34. 10. 6	32. 38. 55	31. 7. 37
9		29. 36. 11	28. 4. 38	26. 33. 0	25. 1. 15	23. 29. 24			
9	Spica ♍					76. 43. 42	75. 9. 49	73. 35. 37	72. 1. 8
10		70. 26. 21	68. 51. 16	67. 15. 51	65. 40. 6	64. 4. 3	62. 27. 40	60. 50. 55	59. 13. 49
11		57. 36. 23	55. 58. 34	54. 20. 23	52. 41. 49	51. 2. 52	49. 23. 32	47. 43. 47	46. 3. 39
12		44. 23. 7	42. 42. 10	41. 0. 48	39. 19. 1	37. 36. 50	35. 54. 13	34. 11. 11	32. 27. 44
13		30. 43. 52	28. 59. 36	27. 14. 55	25. 29. 50	23. 44. 21			
13	Antares.					69. 34. 27	67. 49. 27	66. 4. 3	64. 18. 15
14		62. 32. 5	60. 45. 33	58. 58. 40	57. 11. 26	55. 23. 53	53. 36. 0	51. 47. 49	49. 59. 21
15		48. 10. 40	46. 21. 44	44. 32. 37	42. 43. 20	40. 53. 57	39. 4. 24	37. 14. 51	35. 25. 20
16		33. 35. 56	31. 46. 40	29. 57. 39	28. 8. 57	26. 20. 36			
16	α Aquilæ.					78. 18. 32	76. 34. 56	74. 51. 21	73. 7. 50
17		71. 24. 26	69. 41. 13	67. 58. 13	66. 15. 30	64. 33. 6	62. 51. 3	61. 9. 28	59. 28. 23
18		57. 47. 53	56. 8. 5	54. 28. 56	52. 50. 35	51. 13. 6			

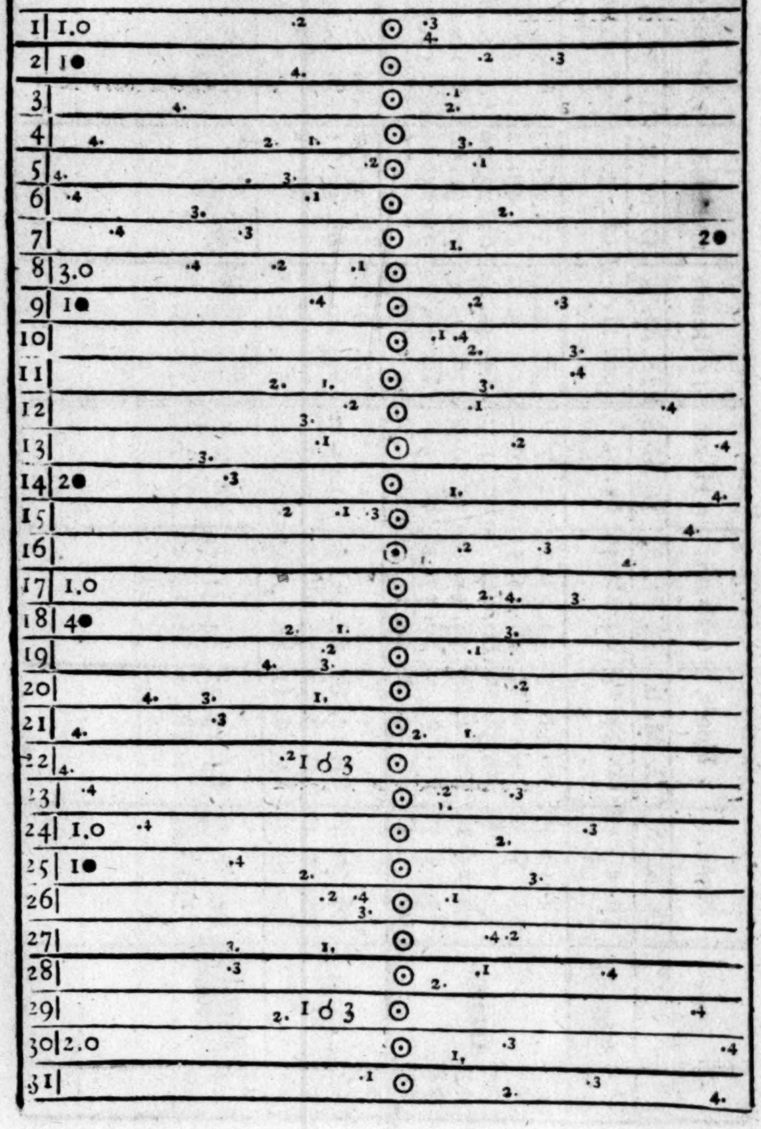
Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
18	α Pegaſi.					96. 58. 38	95. 9. 38	93. 20. 47	91. 32. 8
19		89. 43. 41	87. 55. 29	86. 7. 32	84. 19. 52	82. 32. 31	80. 45. 31	78. 58. 52	77. 12. 35
20		75. 26. 43	73. 41. 16	71. 56. 16	70. 11. 45	68. 27. 42	66. 44. 11	65. 1. 12	63. 18. 46
21		61. 36. 54	59. 55. 38	58. 14. 58	56. 34. 58	54. 55. 37	53. 16. 58	51. 39. 2	50. 1. 52
22		48. 25. 30	46. 49. 58	45. 15. 17	43. 41. 29	42. 8. 37			
22	α Arietis.					84. 2. 55	82. 22. 51	80. 43. 14	79. 4. 3
23		77. 25. 18	75. 47. 0	74. 9. 7	72. 31. 40	70. 54. 39	69. 18. 4	67. 41. 54	66. 6. 10
24		64. 30. 51	62. 55. 58	61. 21. 29	59. 47. 26	58. 13. 47			
21	The Sun.							121. 18. 53	119. 41. 39
22		118. 4. 51	116. 28. 30	114. 52. 35	113. 17. 5	111. 42. 1	110. 7. 23	108. 33. 10	106. 59. 23
23		105. 26. 0	103. 53. 3	102. 20. 31	100. 48. 23	99. 16. 39	97. 45. 19	96. 14. 23	94. 43. 48
24		93. 13. 37	91. 43. 48	90. 14. 20	88. 45. 14	87. 16. 28	85. 48. 4	84. 19. 58	82. 52. 12
25		81. 24. 45	79. 57. 37	78. 30. 46	77. 4. 13	75. 37. 57	74. 11. 57	72. 46. 13	71. 20. 44
26		69. 55. 31	68. 30. 34	67. 5. 49	65. 41. 18	64. 17. 1	62. 52. 56	61. 29. 1	60. 5. 19
27		58. 41. 48	57. 18. 29	55. 55. 19	54. 32. 20	53. 9. 30	51. 46. 50	50. 24. 18	49. 1. 55
28		47. 39. 40	46. 17. 33	44. 55. 33	43. 33. 40	42. 11. 55	40. 50. 15	39. 28. 42	

Diſtances of ☽'s Center from Sun, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D.M.S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
6	The Sun.				39.57.41	41. 19. 48	42. 42. 1	44. 4. 21	45.26.48
7		46. 49. 21	48. 12. 2	49. 34. 51	50.57.48	52. 20. 53	53. 44. 7	55. 7. 30	56.31. 1
8		57. 54. 47	59. 18. 42	60. 42. 48	62. 7. 4	63. 31. 36	64. 56. 18	66. 21. 13	67.46.22
9		69. 11. 44	70. 37. 22	72. 3. 15	73.29.24	74. 55. 48	76. 22. 28	77. 49. 25	79.16.40
10		80. 44. 12	82. 12. 3	83. 40. 14	85. 8.44	86. 37. 34	88. 6. 44	89. 36. 14	91. 6. 6
11		92. 36. 19	94. 6. 54	95. 37. 52	97. 9.13	98. 40. 57	100. 13. 5	101. 45. 36	103.18.32
12		104. 51. 52	106. 25. 38	107. 59. 48	109.34.24	111. 9. 24	112. 44. 51	114. 20. 43	115.57. 0
13		117. 33. 44	119. 10. 54	120. 48. 30					
10	Pollux.					28. 45. 46	30. 13. 29	31. 42. 8	33.11.47
11		34. 42. 22	36. 13. 52	37. 46. 9	39.19.13	40. 53. 7	42. 27. 39	44. 2. 50	45.38.41
12		47. 15. 13	48. 52. 20	50. 30. 2	52. 8.19	53. 47. 13	55. 26. 41	57. 6. 40	58.47.11
13		60. 28. 15							
13	Regulus.	23. 27. 46	25. 10. 15	26. 53. 20	28.37. 3	30. 21. 24	32. 6. 21	33. 51. 48	35.37.48
14		37. 24. 20	39. 11. 22	40. 58. 52	42.46.49	44. 35. 15	46. 24. 8	48. 13. 25	50. 3. 6
15		51. 53. 12	53. 43. 41	55. 34. 29	57.25.38	59. 17. 9	61. 9. 0	63. 1. 7	64.53.31
16		66. 46. 12	68. 39. 8	70. 32. 16	72.25.36	74. 19. 10			
16	Spica ♍					20. 40. 13	22. 33. 53	24. 27. 41	26.21.41
17		28. 15. 50	30. 10. 8	32. 4. 28	33.58.52	35. 53. 21	37. 47. 51	39. 42. 18	41.36.42
18		43. 31. 6	45. 25. 24	47. 19. 33	49.13.35	51. 7. 31	53. 1. 17	54. 54. 49	56.48.10

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S	D. M. S.	D. M. S.	D. M. S.	D. M. S.
19	Spica ♍	58. 41. 19	60. 34. 13	62. 26. 49	64. 19. 9	66. 11. 14	68. 3. 0	69. 54. 26	71. 45. 31
20		73. 36. 17							
20	Antares.	28. 59. 40	30. 45. 29	32. 31. 24	34. 17. 16	36. 3. 13	37. 48. 57	39. 34. 32	41. 19. 59
21		43. 5. 16	44. 50. 14	46. 34. 53	48. 19. 14	50. 3. 19	51. 47. 2	53. 30. 23	55. 13. 22
22		56. 56. 1	58. 38. 16	60. 20. 8	62. 1. 37	63. 42. 43	65. 23. 26	67. 3. 46	68. 43. 42
23		70. 23. 15	72. 2. 24	73. 41. 10	75. 19. 33	76. 57. 33	78. 35. 10	80. 12. 26	81. 49. 19
24		83. 25. 50	85. 2. 0	86. 37. 49	88. 13. 17	89. 48. 24	91. 23. 11	92. 57. 39	94. 31. 48
25		96. 5. 37	97. 39. 8	99. 12. 21	100. 45. 17	102. 17. 55			
25	α Aquilæ.					54. 26. 6	55. 47. 2	57. 8. 6	58. 29. 21
26		59. 50. 46	61. 12. 19	62. 33. 55	63. 55. 36	65. 17. 23	66. 39. 11	68. 0. 59	69. 22. 48
27		70. 44. 40	72. 6. 32	73. 28. 23	74. 50. 14	76. 12. 4	77. 33. 52	78. 55. 37	80. 17. 21
28		81. 39. 2	83. 0. 41	84. 22. 16	85. 43. 49	87. 5. 18			
28	Fomalhaut.					56. 54. 40	58. 11. 56	59. 29. 26	60. 47. 12
29		62. 5. 15	63. 23. 32	64. 41. 59	66. 0. 39	67. 19. 31	68. 38. 33	69. 57. 43	71. 17. 1
30		72. 36. 29	73. 56. 5	75. 15. 46	76. 35. 33	77. 55. 26			

Configurations of the SATELLITES of JUPITER at Ten o' Clock at Night



Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	W.	Nicomede.
2	Th.	*Aſcenſion Day.*
3	F.	On mor. of Aſc. 5 ret.
4	Sa.	*K. Geo.* III. *born* 1738.
5	*Su.*	*Su.aft.Aſc. Pr.Er.Aug.b.*
6	M.	Eaſt.T. ends. | Bonif. C.
7	Tu.	T.div.m.
8	W.	
9	Th.	Oxford Term ends.
10	F.	*Prs. Amelia born.*
11	Sa.	*St. Barnabas.*
12	*Su.*	*Whit-Sunday.*
13	M.	*Whit-Monday.*
14	Tu.	*Whit-Tueſday.*
15	W.	
16	Th.	
17	F.	St. Alban.
18	Sa.	
19	*Su.*	*Trinity-Sunday.*
20	M.	Tranſl. of Ed. K. of W.S.
21	Tu.	[On mor. of H.T. 1 ret.
22	W.	Oxford Term begins.
23	Th.	
24	F.	*Nativ. of St. John Bapt.*
25	Sa.	[Trin. Ter. begins,
26	*Su.*	*1ſt Sunday after Trinity.*
27	M.	In 8 days of H.Tr. 2 ret.
28	Tu.	
29	W.	*St. Peter.*
30	Th.	

Phaſes of the Moon.

	D.	H.	M.
New Moon —	1.	9.	14
Firſt Quarter —	9.	4.	42
Full Moon ——	15.	19.	43
Laſt Quarter —	22.	19.	30
New Moon ——	30.	23.	41

Other Phenomena.

D.	H.M.	
6.	5.30	☾ 1 ad α ♋
	6.32	☾ 2 ad α ♋
	11.27½	Im. of κ ♋ * 1′½ S. of ☾'s cent.
7.	2.37	☾ ο ♌.
	12. 5	☾ π ♌
9.	11. 8½	Im. of υ ♌ * 15′ N. of ☾'s cent.
	11.30¾	Em. * 14′½ N.
12.	9.44	Im. of λ ♍ * 12′ N. of ☾'s cent.
	10.33½	Em. * 11′¼ N.
13.	15.32	☾ 4 ad ζ ♎
	23.15	☾ θ ♎
17.		☿ Stationary.
18.	6.18	☾ β ♑
20.	8.53	☾ θ ♒
21.	1.37	☉ enters ♋
23.	20.59	☾ ε ♓
24.	1.37	☾ ζ ♓
28.	0.48	☾ 1 ad δ ♉
	1.19	☾ 2 ad δ ♉
29.		♃ β ♍ diff. Lat. [35′.

JUNE 1791.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Asc. in Time.	Sun's Declin. North.	Equat. of Time. Sub.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	W.	2. 10.49.58	4. 36.59,3	22. 5.31	2.37,8	9,2
2	Th.	2. 11.47.26	4. 41. 5,1	22.13.26	2.28,6	9,6
3	F.	2. 12.44.53	4. 45.11,3	22.20.58	2.19,0	9,9
4	Sa.	2. 13.42.18	4. 49.17,8	22.28. 6	2. 9,1	10,2
5	*Su.*	2. 14.39.42	4. 53.24,6	22.34.51	1.58,9	10,6
6	M.	2. 15.37. 5	4. 57.31,8	22.41.12	1.48,3	11,0
7	Tu.	2. 16.34.28	5. 1.39,3	22.47. 9	1.37,3	11,2
8	W.	2. 17.31.49	5. 5.47,1	22.52.42	1.26,1	11,4
9	Th.	2. 18.29. 9	5. 9.55,1	22.57.51	1.14,7	11,6
10	F.	2. 19.26.28	5. 14. 3,3	23. 2.36	1. 3,1	11,8
11	Sa.	2. 20.23.46	5. 18.11,7	23. 6.56	0.51,3	12,0
12	*Su.*	2. 21.21. 3	5. 22.20,3	23.10.52	0.39,3	12,2
13	M.	2. 22.18.19	5. 26.29,1	23.14.24	0.27,1	12,4
14	Tu.	2. 23.15.35	5. 30.38,0	23.17.31	0.14,7	12,5
15	W.	2. 24.12.50	5. 34.47,1	23.20.13	0. 2,2	12,6
16	Th.	2. 25.10. 4	5. 38.56,3	23.22.31	Ad.10,4	12,7
17	F.	2. 26. 7.18	5. 43. 5,6	23.24.24	0.23,1	12,7
18	Sa.	2. 27. 4.31	5. 47.14,9	23.25.52	0.35,8	12,8
19	*Su.*	2. 28. 1.44	5. 51.24,3	23.26.56	0.48,6	12,9
20	M.	2. 28.58.57	5. 55.33,8	23.27.35	1. 1,5	12,9
21	Tu.	2. 29.56.10	5. 59.43,3	23.27.49	1.14,4	13,0
22	W.	3. 0.53.23	6. 3.52,8	23.27.38	1.27,4	12,9
23	Th.	3. 1.50.36	6. 8. 2,3	23.27. 2	1.40,3	12,8
24	F.	3. 2.47.49	6. 12.11,7	23.26. 2	1.53,1	12,7
25	Sa.	3. 3.45. 2	6. 16.21,0	23.24.37	2. 5,8	12,6
26	*Su.*	3. 4.42.15	6. 20.30,2	23.22.47	2.18,4	12,6
27	M.	3. 5.39.28	6. 24.39,4	23.20.33	2.31,0	12,5
28	Tu.	3. 6.36.42	6. 28.48,3	23.17.54	2.43,5	12,3
29	W.	3. 7.33.56	6. 32.57,3	23.14.50	2.55,8	12,0
30	Th.	3. 8.31.10	6. 37. 5,9	23.11.22	3. 7,8	

Days.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	15.48,8	1. 8,3	2.23,6	0.006346	6.19.17
7	15.48,2	1. 8,6	2.23,4	0.006657	6.18.58
13	15.47,6	1. 8,7	2.23,2	0.006890	6.18.39
19	15.47,2	1. 8,8	2.23,1	0.007074	6.18.20
25	15.47,0	1. 8,8	2.23,0	0.007204	6.18. 1

Eclipses of the Satellites of Jupiter.

I. Satellite. Emerſions.

Days	H. M. S.
1	12.28.29
3	6.56.53
5	1.25.17
6	19.53.36
8	14.21.55
10	8.50. 9
12	3.18.27
13	21.46.46
15	16.15. 2
*17	10.43.20
19	5.11.37
20	23.39.52
22	18. 8.10
24	12.36.25
26	7. 4.38
28	1.32.51
29	20. 1. 3

II. Satellite. Emerſions.

Days	H. M. S.
1	7.44.57
4	21. 2.56
*8	10.20.52
11	23.38.43
15	12.56.33
19	2.14.25
22	15.32.19
26	4.50.18
29	18. 8.17

III. Satellite.

Days	H. M. S.	
2	14.38.20	I
2	17.13.55	E
9	18.36.20	I
9	21.10.52	E
16	22.34. 9	I
17	1. 7.36	E
24	2.31.53	I
24	5. 4.19	E

IV. Satellite.

4	13.20.57	I
4	15.52.32	E
21	7.19.36	I
*21	9.42. 2	E

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Passage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
Inf. ☌ 5^{d}. $0\frac{3}{4}^{h}$. MERCURY. Gr. Elong. 29^{d}.						
1	8. 3. 37	2. 9 S	2. 16. 51	1. 47 S	21. 2 N	0. 26
4	8. 11. 52	3. 5	2. 15. 16	2. 37	20. 3	0. 8
7	8. 20. 6	3. 57	2. 13. 36	3. 20	19. 9	23. 43
10	8. 28. 26	4. 45	2. 12. 6	3. 53	18. 25	23. 25
13	9. 6. 56	5. 27	2. 11. 0	4. 14	17. 56	23. 9
16	9. 15. 42	6. 4	2. 10. 28	4. 24	17. 42	22. 55
19	9. 24. 51	6. 32	2. 10. 35	4. 21	17. 45	22. 44
22	10. 4. 31	6. 52	2. 11. 25	4. 9	18. 4	22. 36
25	10. 14. 48	7. 0	2. 12. 57	3. 48	18. 37	22. 31
28	10. 25. 53	6. 54	2. 15. 10	3. 20	19. 19	22. 28
30	11. 3. 47	6. 40	2. 17. 1	2. 59	19. 52	22. 28
VENUS.						
1	5. 12. 46	3. 23 N	3. 16. 45	1. 59 N	24. 23 N	2. 37
7	5. 22. 30	3. 21	3. 23. 46	2. 3	23. 23	2. 43
13	6. 2. 13	3. 14	4. 0. 45	2. 3	22. 0	2. 47
19	6. 11. 55	3. 1	4. 7. 40	1. 59	20. 17	2. 51
25	6. 21. 36	2. 43	4. 14. 31	1. 52	18. 17	2. 54
MARS.						
1	1. 9. 11	0. 17 S	1. 22. 6	0. 10 S	18. 9 N	22. 41
7	1. 12. 35	0. 11	1. 26. 25	0. 7	19. 16	22. 34
13	1. 15. 58	0. 4 S	2. 0. 41	0. 3 S	20. 17	22. 27
19	1. 19. 18	0. 2 N	2. 4. 56	0. 1 N	21. 11	22. 20
25	1. 22. 36	0. 9	2. 9. 8	0. 6	21. 57	22. 12
JUPITER. □ 13^{d}. $8\frac{1}{2}^{h}$.						
1	6. 2. 27	1. 19 N	5. 21. 55	1. 23 N	4. 29 N	6. 54
7	6. 2. 54	1. 19	5. 22. 13	1. 22	4. 21	6. 31
13	6. 3. 22	1. 19	5. 22. 37	1. 21	4. 10	6. 8
19	6. 3. 49	1. 19	5. 23. 6	1. 20	3. 58	5. 44
25	6. 4. 16	1. 19	5. 23. 41	1. 18	3. 42	5. 22
SATURN.						
1	0. 11. 0	2. 28 S	0. 16. 4	2. 20 S	4. 11 N	20. 23
7	0. 11. 13	2. 28	0. 16. 35	2. 21	4. 21	20. 0
13	0. 11. 25	2. 28	0. 17. 3	2. 22	4. 30	19. 37
19	0. 11. 38	2. 28	0. 17. 29	2. 24	4. 39	19. 14
25	0. 11. 50	2. 28	0. 17. 51	2. 25	4. 47	18. 50

JUNE 1791.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D.M.S.
1	W.	2. 6.37.58	2. 12.34.16	3. 40. 12 S	4. 1. 7 S
2	Th.	2. 18.31.44	2. 24.30.39	4. 19. 26	4.34.58
3	F.	3. 0.31. 9	3. 6.33.26	4. 47. 30	4.56.53
4	Sa.	3. 12.37.40	3. 18.44. 6	5. 2. 56	5. 5.38
5	*Su.*	3. 24.52.51	4. 1. 4.17	5. 4. 47	5. 0.22
6	M.	4. 7.18.33	4. 13.36. 1	4. 52. 21	4.40.45
7	Tu.	4. 19.56.57	4. 26.21.42	4. 25. 35	4. 6.57
8	W.	5. 2.50.36	5. 9.24. 0	3. 44. 56	3.19.44
9	Th.	5. 16. 2.18	5. 22.45.44	2. 51. 29	2.20.32
10	F.	5. 29.34.42	6. 6.29.18	1. 47. 8	1.11.44 S
11	Sa.	6. 13.29.45	6. 20.36. 2	0. 34. 47 S	0. 3.13 N
12	*Su.*	6. 27.48. 4	7. 5. 5.33	0. 41. 38 N	1.19.49
13	M.	7. 12.28. 7	7. 19.55. 4	1. 57. 5	2.32.38
14	Tu.	7. 27.25.38	8. 4.58.46	3. 5. 48	3.35.52
15	W.	8. 12.33.25	8. 20. 8.16	4. 2. 13	4.24.17
16	Th.	8. 27.42. 3	9. 5.13.29	4. 41. 38	4.53.59
17	F.	9. 12.41.18	9. 20. 4.25	5. 1. 10	5. 3.15
18	Sa.	9. 27.21.54	10. 4.32.58	5. 0. 21	4.52.42
19	*Su.*	10. 11.37. 6	10. 18.33.58	4. 40. 41	4.24.40
20	M.	10. 25.23.28	11. 2. 5.38	4. 5. 7	3.42.29
21	Tu.	11. 8.40.43	11. 15. 9. 6	3. 17. 15	2.49.52
22	W.	11. 21.31.13	11. 27.47.40	2. 20. 46	1.50.23
23	Th.	0. 3.59. 2	0. 10. 5.58	1. 19. 4	0.47.14 N
24	F.	0. 16. 9. 7	0. 22. 9.11	0. 15. 10 N	0.16.46 S
25	Sa.	0. 28. 6.45	1. 4. 2.33	0. 48. 17 S	1.19. 5
26	*Su.*	1. 9.57. 5	1. 15.51. 1	1. 48. 54	2.17.26
27	M.	1. 21.44.47	1. 27.38.56	2. 44. 28	3. 9.41
28	Tu.	2. 3.33.51	2. 9.29.56	3. 32. 54	3.53.50
29	W.	2. 15.27.31	2. 21.26.52	4. 12. 17	4.28. 1
30	Th.	2. 27.28.12	3. 3.31.41	4. 40. 49	4.50.32

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid.	☽'s Right Aſcenſ. at Noon.	☽'s Right Aſcenſ. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	W.	1	☌	65. 26	71. 39	17. 49 N	18. 20 N
2	Th.	2	0. 32	77. 55	84. 13	18. 39	18. 46
3	F.	3	1. 20	90. 33	96. 53	18. 40	18. 21
4	Sa.	4	2. 8	103. 13	109. 33	17. 50	17. 6
5	*Su.*	5	2. 56	115. 52	122. 10	16. 10	15. 3
6	M.	6	3. 44	128. 27	134. 42	13. 44	12. 16
7	Tu.	7	4. 31	140. 57	147. 11	10. 38	8. 52
8	W.	8	5. 18	153. 26	159. 43	6. 58	4. 58
9	Th.	9	6. 6	166. 3	172. 26	2. 53 N	0. 44 N
10	F.	10	6. 56	178. 54	185. 28	1. 28 S	3. 41 S
11	Sa.	11	7. 48	192. 11	199. 3	5. 52	8. 0
12	*Su.*	12	8. 42	206. 4	213. 15	10. 3	11. 59
13	M.	13	9. 39	220. 38	228. 11	13. 44	15. 17
14	Tu.	14	10. 39	235. 53	243. 43	16. 35	17. 36
15	W.	15	11. 40	251. 39	259. 37	18. 19	18. 42
16	Th.	16	12. 42	267. 35	275. 29	18. 45	18. 28
17	F.	17	13. 42	283. 17	290. 57	17. 52	16. 58
18	Sa.	18	14. 39	298. 25	305. 41	15. 48	14. 24
19	*Su.*	19	15. 32	312. 45	319. 37	12. 49	11. 4
20	M.	20	16. 22	326. 17	332. 45	9. 13	7. 17
21	Tu.	21	17. 9	339. 4	345. 14	5. 17	3. 15 S
22	W.	22	17. 54	351. 17	357. 15	1. 13 S	0. 49 N
23	Th.	23	18. 38	3. 8	8. 58	2. 48 N	4. 44
24	F.	24	19. 21	14. 47	20. 35	6. 36	8. 23
25	Sa.	25	20. 5	26. 24	32. 15	10. 4	11. 39
26	*Su.*	26	20. 50	38. 8	44. 4	13. 6	14. 24
27	M.	27	21. 36	50. 4	56. 7	15. 34	16. 35
28	Tu.	28	22. 23	62. 15	68. 26	17. 25	18. 3
29	W.	29	23. 11	74. 41	81. 0	18. 30	18. 44
30	Th.	1	23. 59	87. 20	93. 43	18. 46	18. 35

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid^{r}. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	W.	14. 45	14. 46	54. 7	54. 10	5219	5215
2	Th.	14. 47	14. 49	54. 15	54. 22	5209	5199
3	F.	14. 51	14. 54	54. 30	54. 39	5189	5177
4	Sa.	14. 57	15. 0	54. 50	55. 1	5162	5148
5	*Su.*	15. 3	15. 7	55. 14	55. 29	5130	5111
6	M.	15. 11	15. 16	55. 45	56. 2	5090	5068
7	Tu.	15. 21	15. 27	56. 21	56. 41	5044	5018
8	W.	15. 33	15. 39	57. 2	57. 25	4991	4962
9	Th.	15. 45	15. 52	57. 49	58. 13	4932	4902
10	F.	15. 58	16. 5	58. 37	59. 2	4872	4842
11	Sa.	16. 12	16. 18	59. 26	59. 49	4812	4784
12	*Su.*	16. 24	16. 29	60. 10	60. 29	4759	4736
13	M.	16. 34	16. 37	60. 46	61. 0	4716	4699
14	Tu.	16. 40	16. 41	61. 9	61. 14	4689	4683
15	W.	16. 42	16. 41	61. 16	61. 14	4680	4683
16	Th.	16. 39	16. 35	61. 6	60. 53	4692	4708
17	F.	16. 31	16. 25	60. 35	60. 14	4729	4754
18	Sa.	16. 18	16. 11	59. 50	59. 25	4783	4813
19	*Su.*	16. 4	15. 56	58. 58	58. 30	4846	4881
20	M.	15. 49	15. 41	58. 1	57. 33	4917	4952
21	Tu.	15. 34	15. 27	57. 6	56. 41	4986	5018
22	W.	15. 20	15. 14	56. 16	55. 52	5050	5081
23	Th.	15. 8	15. 3	55. 31	55. 12	5108	5133
24	F.	14. 58	14. 55	54. 57	54. 44	5153	5170
25	Sa.	14. 52	14. 49	54. 33	54. 24	5185	5197
26	*Su.*	14. 48	14. 47	54. 18	54. 14	5205	5210
27	M.	14. 46	14. 46	54. 11	54. 10	5214	5215
28	Tu.	14. 46	14. 47	54. 12	54. 15	5213	5209
29	W.	14. 48	14. 50	54. 20	54. 27	5202	5193
30	Th.	14. 52	14. 55	54. 34	54. 43	5183	5171

Diſtances of ☽'s Center from Sun, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
3	Regulus.	56. 35. 39	55. 5. 57	53. 36. 9	52. 6. 17	50. 36. 19	49. 6. 16	47. 36. 7	46. 5. 53
4		44. 35. 33	43. 5. 6	41. 34. 33	40. 3. 54	38. 33. 10	37. 2. 20	35. 31. 26	34. 0. 25
5		32. 29. 20	30. 58. 7	29. 26. 51	27. 55. 32	26. 24. 11	24. 52. 50	23. 21. 29	21. 50. 9
6		20. 18. 52							
6	Spica ♍	73. 31. 11	71. 57. 30	70. 23. 37	68. 49. 29	67. 15. 9	65. 40. 35	64. 5. 47	62. 30. 44
7		60. 55. 26	59. 19. 53	57. 44. 5	56. 8. 0	54. 31. 40	52. 55. 3	51. 18. 9	49. 40. 58
8		48. 3. 30	46. 25. 44	44. 47. 39	43. 9. 16	41. 30. 35	39. 51. 34	38. 12. 14	36. 32. 34
9		34. 52. 35	33. 12. 17	31. 31. 39	29 50. 41	28. 9. 24	26. 27. 47	24. 45. 51	23. 3. 34
10		21. 20. 58							
10	Antares.	67. 12. 54	65. 30. 46	63. 48. 18	62. 5. 29	60. 22. 19	58. 38. 50	56. 55. 3	55. 10. 57
11		53. 26. 33	51. 41. 51	49. 56. 54	48. 11. 40	46. 26. 13	44. 40. 30	42. 54. 35	41. 8. 30
12		39. 22. 18	37. 35. 55	35. 49. 30	34. 3. 5	32. 16. 45	30. 30. 32	28. 44. 32	26. 58. 46
13		25. 13. 18							
13	α Aquilæ.	77. 10. 5	75. 28. 58	73. 47. 46	72. 6. 31	70. 25. 18	68. 44. 9	67. 3. 8	65. 22. 16
14		63. 41. 39	62. 1. 17	60. 21. 15	58. 41. 37	57. 2. 28	55. 23. 51	53. 45. 50	52. 8. 29
15		50. 31. 51							
15	α Pegaſi.	96. 12. 4	94. 23. 23	92. 34. 42	90. 46. 5	88. 57. 31	87. 9. 3	85. 20. 43	83. 32. 32
16		81. 44. 31	79. 56. 43	78. 9. 9	76. 21. 51	74. 34. 51	72. 48. 10	71. 1. 50	69. 15. 52

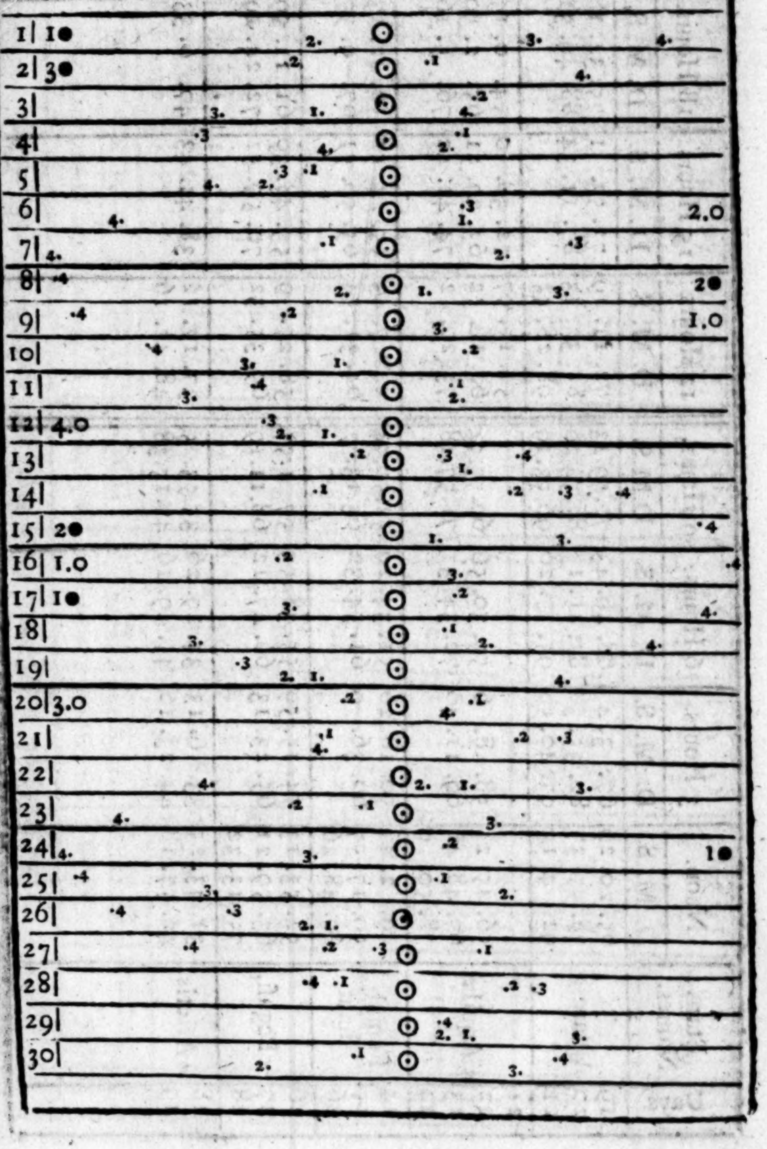
Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S
17		67. 30. 19	65. 45. 12	64. 0. 32	62.16.22	60. 32. 43	58. 49. 37	57. 7. 7	55.25.14
18	α Pegaſi.	53. 44. 0	52. 3. 26	50. 23. 38	48.44.36	47. 6. 24	45. 29. 5	43. 52. 41	42.17.16
19		40. 42. 51							
19		82. 26. 22	80. 43. 49	79. 1. 43	77.20. 4	75. 38. 52	73. 58. 8	72. 17. 52	70.38. 5
20		68. 58. 45	67. 19. 55	65. 41. 34	64. 3.41	62. 26. 17	60. 49. 22	59. 12. 57	57.37. 0
21	α Arietis.	56. 1. 33	54. 26. 36	52. 52. 8	51.18.11	49. 44. 43	48. 11. 45	46. 39. 19	45. 7.25
22		43. 36. 3	42. 5. 13	40. 34. 57	39. 5.17	37. 36. 14	36. 7. 50	34. 40. 4	33.13. 1
23		31. 46. 38							
20				120. 23. 7	118.50.27	117. 18. 12	115. 46. 22	114. 14. 56	112.43.53
21		111. 13. 15	109. 43. 0	108. 13. 8	106.43.39	105. 14. 32	103. 45. 48	102. 17. 25	100.49.23
22		99. 21. 42	97. 54. 21	96. 27. 19	95. 0.36	93. 34. 13	92. 8. 9	90. 42. 20	89.16.50
23	The Sun.	87. 51. 36	86. 26. 39	85. 1. 55	83.37.28	82. 13. 15	80. 49. 18	79. 25. 33	78. 2. 2
24		76. 38. 43	75. 15. 35	73. 52. 38	72.29.51	71. 7. 15	69. 44. 50	68. 22. 33	67. 0.25
25		65. 38. 26	64. 16. 34	62. 54. 48	61.33. 9	60. 11. 37	58. 50. 12	57. 28. 50	56. 7.34
26		54. 45. 23	53. 25. 16	52. 4. 11	50.43.10	49. 22. 12	48. 1. 18	46. 40. 25	45.19.34
27		43. 58. 46	42. 38. 0	41. 17. 13	39.56.28				

Diſtances of ☽'s Center from Sun, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D.M.S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
5		40. 29. 5	41. 53. 41	43. 18. 28	44.43.26	46. 8. 35	47. 33. 56	48. 59. 30	50.25.17
6		51. 51. 16	53. 17. 29	54. 43. 56	56.10.37	57. 37. 32	59. 4. 41	60. 32. 5	61.59.44
7		63. 27. 37	64. 55. 47	66. 24. 13	67.52.55	69. 21. 54	70. 51. 10	72. 20. 43	73.50.35
8	The Sun.	75. 20. 43	76. 51. 10	78. 21. 55	79.53. 0	81. 24. 23	82. 56. 7	84. 28. 11	86. 0.36
9		87. 33. 20	89. 6. 25	90. 39. 50	92.13.37	93. 47. 44	95. 22. 14	96. 57. 7	98.32.20
10		100. 7. 56	101. 43. 54	103. 20. 13	104.56.55	106. 33. 58	108. 11. 24	109. 49. 13	111.27.23
11		113. 5. 55	114. 44. 49	116. 24. 4	118. 3.40	119. 43. 38			
9		19. 23. 5	21. 1. 0	22. 39. 33	24.18.42	25. 58. 30	27. 38. 52	29. 19. 45	31. 1. 9
10		32. 43. 6	34. 25. 28	36. 8. 17	37.51.33	39. 35. 17	41. 19. 26	43. 4. 1	44.49. 1
11	Regulus.	46. 34. 26	48. 20. 16	50. 6. 29	51.53. 6	53. 40. 7	55. 27. 31	57. 15. 17	59. 3.25
12		60. 51. 55	62. 40. 46	64. 29. 57	66.19.27	68. 9. 18	69. 59. 28	71. 49. 55	73.40.41
13		75. 31. 44							
13		21. 53. 35	23. 44. 46	25. 36. 11	27.27.54	29. 19. 56	31. 12. 12	33. 4. 39	34.57.17
14	Spica ♍	36. 50. 8	38. 43. 7	40. 36. 12	42.29.24	44. 22. 43	46. 16. 8	48. 9. 35	50. 3. 3
15		51. 56. 34	53. 50. 4	55. 43. 30	57.36.54	59. 30. 15	61. 23. 31	63. 16. 39	65. 9.39
16		67. 2. 32	68. 55. 16	70. 47. 46	72.40. 5	74. 32. 12			
16						29. 51. 51	31. 39. 25	33. 27. 2	35.14.43
17	Antares.	37. 2. 30	38. 50. 17	40. 37. 56	42.25.29	44. 12. 58	46. 0. 13	47. 47. 12	49.33.56
18		51. 20. 28	53. 6. 40	54. 52. 31	56.38. 3	58. 23. 17	60. 8. 10	61. 52. 39	63.36.45

Days.	Stars. Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D.M.S.	D. M. S.	D. M. S.	D. M. S.	D. M. S
19	Antares.	65. 20. 29	67. 3. 47	68. 46. 43	70.29.13	72. 11. 19	73. 53. 1	75. 34. 18	77.15.10
20		78. 55. 37	80. 35. 38	81. 15. 15	83.54.26	85. 33. 13	87. 11. 34	88. 49. 31	90.27. 4
21		92. 4. 13	93. 40. 58	95. 17. 20	96.53.19	98. 28. 55			
21	α Aquilæ.					51. 15. 57	52. 38. 0	54. 0. 15	55.22.42
22		56. 45. 21	58. 8. 6	59. 30. 56	60.53.52	62. 16. 52	63. 39. 51	65. 2. 50	66.25.48
23		67. 48. 46	69. 11. 40	70. 34. 31	71.57.18	73. 20. 2	74. 42. 42	76. 5. 16	77.27.45
24		78. 50. 9							
24	Fomal-haut	49. 2. 44	50. 18. 26	51. 34. 29	52.50.54	54. 7. 43	55. 24. 52	56. 42. 17	57.59.58
25		59. 17. 57	60. 36. 9	61. 54. 32	63.13. 7	64. 31. 54	65. 50. 51	67. 9. 55	68.29. 6
26		69. 48. 26							
26	α Pegaſi.	52. 53. 13	54. 15. 59	55. 38. 53	57. 1.57	58. 25. 9	59. 48. 30	61. 11. 59	62.35.36
27		63. 59. 21	65. 23. 13	66. 47. 12	68.11.19	69. 35. 32	70. 59. 52	72. 24. 19	73.48.52
28		75. 13. 32							
28	α Arietis.	31. 43. 25	33. 6. 13	34. 29. 26	35.53. 5	37. 17. 12	38. 41. 43	40. 6. 33	41.31.45
29		42. 57. 18	44. 23. 10	45. 49. 16	47.15.38	48. 42. 16			

Configurations of the SATELLITES of JUPITER at Three-quarters after Nine o'Clock in the Evening.



Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	F.	
2	Sa.	Viſitation of B.V.Mary
3	*Su.*	*2d Sunday after Trinity.*
4	M.	Tranſ. of St.Mart. In 15
5	Tu.	Camb. Com. [days of H.
6	W.	[Tr. 3 ret.
7	Th.	
8	F.	Camb. Term ends.
9	Sa.	
10	*Su.*	*3d Sunday after Trinity.*
11	M.	Oxford Act. In 3 w. of
12	Tu.	[H. Tr. 4 ret.
13	W.	Trin. Term ends.
14	Th.	
15	F.	Swithin.
16	Sa.	Oxford Term ends.
17	*Su.*	*4th Sunday after Trinity.*
18	M.	
19	Tu.	
20	W.	Margaret.
21	Th.	
22	F.	Magdalen.
23	Sa.	
24	*Su.*	*5th Sunday aft.r Trinity.*
25	M.	*St. James.*
26	Tu.	St. Anne.
27	W.	
28	Th.	
29	F.	
30	Sa.	
31	*Su.*	*6th Sunday after Trinity.*

Phaſes of the Moon.

	D. H. M.
Firſt Quarter —	8. 11. 54
Full Moon —	15. 2. 53
Laſt Quarter —	22. 10. 58
New Moon —	30. 12. 39

Other Phenomena.

D.H.M.	
3.10.59	☾ 1 ad α ♋
12. 0	☾ 2 ad α ♋
16.47	☾ κ ♋
4.	☿ ζ ♉ diff. Lat.
8. 0	☾ ο ♌ [5′.
17.27	☾ π ♌
6.	♀ α ♌ diff. Lat.
16.33	☾ υ ♌ [61′.
9.17.45	☾ λ ♍
10.	☿ η ♊ diff. Lat.
23.58	☾ 4 ad ζ ♎ [3′.
11.	☿ μ ♊ diff. Lat.
7.56	☾ θ ♎ [12′.
15.16.25	☾ β ♑
17.	♂ 132 ♉ diff.
18.17	☾ θ ♒ [Lat.46′.
19.	♀ χ ♌ diff. Lat.
21. 4.39	☾ ε ♓ [39′.
9.13	☾ ζ ♓
22.12.27	☉ enters ♌
25. 7.48	☾ 1 ad δ ♉
8.19	☾ 2 ad δ ♉
11. 1	☾ ε ♉ [44′.
26.	♀ τ ♌ diff. Lat
31.	♀ β ♍ diff. Lat
	♄ Station. [59′.

JULY 1791.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Asc. in Time.	Sun's Declin. North.	Equat. of Time. Add.	Diff.
		S. D. M. S.	H. M. S.	D.M.S.	M. S.	S.
1	F.	3. 9.28.23	6. 41.14,3	23. 7.30	3.19,6	11,6
2	Sa.	3. 10.25.37	6. 45.22,5	23. 3.14	3.31,2	11,3
3	*Su.*	3. 11.22.51	6. 49.30,3	22.58.33	3.42,5	10,9
4	M.	3. 12.20. 4	6. 53.37,8	22.53.28	3.53,4	10,6
5	Tu.	3. 13.17.17	6. 57.45,0	22.47.59	4. 4,0	10,3
6	W.	3. 14.14.30	7. 1.51,9	22.42. 6	4.14,3	9,9
7	Th.	3. 15.11.43	7. 5.58,4	22.35.50	4.24,2	9,5
8	F.	3. 16. 8.56	7. 10. 4,5	22.29.10	4.33,7	9,1
9	Sa.	3. 17. 6. 9	7. 14.10,2	22.22. 7	4.42,8	8,7
10	*Su.*	3. 18. 3.22	7. 18.15,5	22.14.41	4.51,5	8,3
11	M.	3. 19. 0.35	7. 22.20,4	22. 6.52	4.59,8	7,8
12	Tu.	3. 19.57.48	7. 26.24,8	21.58.40	5. 7,6	7,3
13	W.	3. 20.55. 0	7. 30.28,6	21.50. 5	5.14,9	6,8
14	Th.	3. 21.52.12	7. 34.32,0	21.41. 8	5.21,7	6,3
15	F.	3. 22.49.26	7. 38.34,9	21.31.49	5.28,0	5,8
16	Sa.	3. 23.46.40	7. 42.37,3	21.22. 8	5.33,8	5,4
17	*Su.*	3. 24.43.54	7. 46.39,2	21.12. 5	5.39,2	4,8
18	M.	3. 25.41. 8	7. 50.40,6	21. 1.41	5.44,0	4,3
19	Tu.	3. 26.38.24	7. 54.41,5	20.50.55	5.48,3	3,7
20	W.	3. 27.35.40	7. 58.41,8	20.39.48	5.52,0	3,2
21	Th.	3. 28.32.57	8. 2.41,5	20.28.20	5.55,2	2,7
22	F.	3. 29.30.15	8. 6.40,7	20.16.32	5.57,9	2,1
23	Sa.	4. 0.27.34	8. 10.39,4	20. 4.23	6. 0,0	1,6
24	*Su.*	4. 1.24.54	8. 14.37,6	19.51.54	6. 1,6	1,1
25	M.	4. 2.22.15	8. 18.35,2	19.39. 4	6. 2,7	0,5
26	Tu.	4. 3.19.38	8. 22.32,2	19.25.56	6. 3,2	0,1
27	W.	4. 4.17. 2	8. 26.28,7	19.12.28	6. 3,1	0,7
28	Th.	4. 5.14.26	8. 30.24,6	18.58.40	6. 2,4	1,2
29	F.	4. 6.11.51	8. 34.19,9	18.44.33	6. 1,2	1,8
30	Sa.	4. 7. 9.17	8. 38.14,6	18.30. 8	5.59,4	2,5
31	*Su.*	4. 8. 6.44	8. 42. 8,7	18.15.25	5.56,9	

Days of the Month.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	15. 46,9	1. 8,6	2. 23,0	0. 007251	6. 17. 41
7	15. 47,0	1. 8,4	2. 23,0	0. 007202	6. 17. 22
13	15. 47,2	1. 8,0	2. 23,1	0. 007072	6. 17. 3
19	15. 47,6	1. 7,6	2. 23,2	0. 006888	6. 16. 44
25	15. 48,2	1. 7,1	2. 23,4	0. 006654	6. 16. 25

ECLIPSES of the SATELLITES of JUPITER.

I. Satellite. Emerſions.		II. Satellite. Emerſions.		III. Satellite.		
Days	H. M. S.	Days	H. M. S.	Days	H. M. S.	
1	14. 29. 23	3	7. 26. 12	1	6. 29. 32	I
3	8. 57. 41	6	20. 44. 13	1	9. 0. 56	E
5	3. 26. 0	10	10. 2. 21	8	10. 27. 31	I
6	21. 54. 19	13	23. 20. 34	8	12. 57. 50	E
8	16. 22. 39	17	12. 38. 52	15	14. 25. 47	I
10	10. 51. 0	21	1. 57. 15	15	16. 55. 3	E
12	5. 19. 25	24	15. 15. 45	22	18. 24. 25	I
13	23. 47. 48	28	4. 34. 22	22	20. 52. 37	E
15	18. 16. 13	31	17. 53. 7	29	22. 23. 26	I
17	12. 44. 40			30	0. 50. 35	E
19	7. 13. 9			IV. Satellite		
21	1. 41. 37					
22	20. 10. 10					
24	14. 38. 42			8	1. 18. 27	I
*26	9. 7. 16			8	3. 31. 14	E
28	3. 35. 50			24	19. 19. 22	I
29	22. 4. 29			24	21. 21. 44	E
31	16. 33. 8					

JULY 1791.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Passage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
			MERCURY. Sup. ☌ 27^d. $1^h\frac{3}{4}$.			
1	11. 7. 54	6. 30 S	2. 18. 3	2. 48 S	20. 9 N	22. 28
4	11. 21. 3	5. 44	2. 21. 34	2. 11	21. 1	22. 32
7	0. 5. 27	4. 33	2. 25. 42	1. 33	21. 51	22. 38
10	0. 21. 12	2. 56	3. 0. 24	0. 53	22. 34	22. 47
13	1. 8. 17	0. 56 S	3. 5. 39	0. 15 S	23. 5	22. 58
16	1. 26. 27	1. 18 N	3. 11. 21	0. 20 N	23. 18	23. 11
19	2. 15. 18	3. 27	3. 17. 24	0. 51	23. 10	23. 26
22	3. 4. 10	5. 14	3. 23. 40	1. 15	22. 37	23. 41
25	3. 22. 26	6. 26	4. 0. 1	1. 32	21. 40	23. 56
28	4. 9. 34	6. 57	4. 6. 18	1. 43	20. 23	0. 6
31	4. 25. 19	6. 54	4. 12. 27	1. 46	18. 47	0. 20
			VENUS.			
1	7. 1. 15	2. 20 N	4. 21. 18	1. 41 N	16. 0 N	2. 56
7	7. 10. 52	1. 54	4. 28. 0	1. 26	13. 31	2. 57
13	7. 20. 28	1. 24	5. 4. 36	1. 7	10. 52	2. 57
19	8. 0. 2	0. 52	5. 11. 5	0. 44	8. 5	2. 57
25	8. 9. 34	0. 19	5. 17. 27	0. 16	5. 13	2. 56
			MARS.			
1	1. 25. 52	0. 15 N	2. 13. 19	0. 10 N	22. 35 N	22. 5
7	1. 29. 6	0. 21	2. 17. 27	0. 14	23. 6	21. 58
13	2. 2. 18	0. 27	2. 21. 34	0. 18	23. 30	21. 52
19	2. 5. 28	0. 33	2. 25. 38	0. 22	23. 46	21. 45
25	2. 8. 36	0. 39	2. 29. 41	0. 26	23. 54	21. 39
			JUPITER.			
1	6. 4. 43	1. 19 N	5. 24. 21	1. 16 N	3. 24 N	4. 59
7	6. 5. 10	1. 19	5. 25. 5	1. 15	3. 6	4. 37
13	6. 5. 38	1. 19	5. 25. 54	1. 14	2. 46	4. 16
19	6. 6. 5	1. 19	5. 26. 47	1. 14	2. 25	3. 55
25	6. 6. 32	1. 19	5. 27. 43	1. 12	2. 1	3. 35
			SATURN. □ 10^d. 13^h.			
1	0. 12. 2	2. 28 S	0. 18. 11	2. 27 S	4. 53 N	18. 27
7	0. 12. 15	2. 28	0. 18. 27	2. 28	4. 57	18. 3
13	0. 12. 27	2. 28	0. 18. 39	2. 30	5. 1	17. 39
19	0. 12. 39	2. 28	0. 18. 49	2. 32	5. 2	17. 16
25	0. 12. 52	2. 28	0. 18. 54	2. 33	5. 3	16. 52

JULY 1791.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D.M.S.
1	F.	3. 9.37.29	3. 15.45.40	4. 56. 59 S	5. 0. 1 S
2	Sa.	3. 21.56.21	3. 28. 9.34	4. 59. 35	4.55.34
3	*Su.*	4. 4.25.23	4. 10.43.51	4. 47. 58	4.36.49
4	M.	4. 17. 5. 3	4. 23.29. 3	4. 22. 8	4. 4. 3
5	Tu.	4. 29.56. 1	5. 6.26. 0	3. 42. 41	3.18.15
6	W.	5. 12.59.17	5. 19.35.56	2. 50. 57	2.21. 7
7	Th.	5. 26.16.16	6. 3. 0.24	1. 49. 3	1.15. 8
8	F.	6. 9.48.34	6. 16.40.58	0. 39. 48 S	0. 3.30 S
9	Sa.	6. 23.37.42	7. 0.38.53	0. 33. 13 N	1. 9.49 N
10	*Su.*	7. 7.44.32	7. 14.54.28	1. 45. 43	2.20.16
11	M.	7. 22. 8.30	7. 29.26.11	2. 52. 53	3.22.55
12	Tu.	8. 6.47. 1	8. 14.10.19	3. 49. 46	4.12.55
13	W.	8. 21.35.14	8. 29. 0.48	4. 31. 52	4.46.15
14	Th.	9. 6.26. 0	9. 13.49.45	4. 55. 48	5. 0.20
15	F.	9. 21.10.56	9. 28.28.33	4. 59. 51	4.54.28
16	Sa.	10. 5.41.40	10. 12.49.28	4. 44. 24	4.30. 0
17	*Su.*	10. 19.51.23	10. 26.46.52	4. 11. 39	3.49.48
18	M.	11. 3.35.45	11. 10.17.55	3. 24. 59	2.57.40
19	Tu.	11. 16.53.24	11. 23.22.30	2. 28. 22	1.57.34
20	W.	11. 29.45.30	0. 6. 2.53	1. 25. 43	0.53.15 N
21	Th.	0. 12.15.10	0. 18.22.59	0. 20. 33 N	0.12. 0 S
22	F.	0. 24.26.53	1. 0.27.38	0. 44. 6 S	1.15.25
23	Sa.	1. 6.25.51	1. 12.22.12	1. 45. 41	2.14.38
24	*Su.*	1. 18.17.23	1. 24.12. 0	2. 42. 1	3. 7.35
25	M.	2. 0. 6.41	2. 6. 1.59	3. 31. 8	3.52.25
26	Tu.	2. 11.58.28	2. 17.56.34	4. 11. 15	4.27.24
27	W.	2. 23.56.45	2. 29.59.24	4. 40. 41	4.50.55
28	Th.	3. 6. 4.46	3. 12.13. 7	4. 57. 54	5. 1.31
29	F.	3. 18.24.34	3. 24.39.19	5. 1. 39	4.58. 8
30	Sa.	4. 0.57.21	4. 7.18.40	4. 50. 59	4.40.11
31	*Su.*	4. 13.43.15	4. 20.11. 0	4. 25. 43	4. 7.45

JULY 1791.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid.	☽'s Right Aſcenſ. at Noon.	☽'s Right Aſcenſ. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	F.	2	☌	100. 6	106. 29	18. 11 N	17. 34 N
2	Sa.	3	0. 48	112. 52	119. 14	16. 45	15. 43
3	*Su.*	4	1. 36	125. 35	131. 54	14. 30	13. 7
4	M.	5	2. 23	138. 11	144. 27	11. 34	9. 52
5	Tu.	6	3. 11	150. 43	156. 58	8. 2	6. 5
6	W.	7	3. 59	163. 13	169. 30	4. 3 N	1. 57 N
7	Th.	8	4. 47	175. 51	182. 16	0. 11 S	2. 21 S
8	F.	9	5. 36	188. 45	195. 21	4. 30	6. 37
9	Sa.	10	6. 28	202. 4	208. 56	8. 40	10. 37
10	*Su.*	11	7. 22	215. 58	223. 10	12. 26	14. 5
11	M.	12	8. 19	230. 30	237. 59	15. 32	16. 45
12	Tu.	13	9. 18	245. 37	253. 21	17. 41	18. 20
13	W.	14	10. 18	261. 9	268. 58	18. 40	18. 41
14	Th.	15	11. 19	276. 45	284. 29	18. 23	17. 46
15	F.	16	12. 18	292. 6	299. 34	16. 51	15. 41
16	Sa.	17	13. 14	306. 52	314. 0	14. 16	12. 40
17	*Su.*	18	14. 6	320. 56	327. 41	10. 54	9. 0
18	M.	19	14. 56	334. 16	340. 42	7. 1	4. 58
19	Tu.	20	15. 43	346. 59	353. 9	2. 54 S	0. 50 S
20	W.	21	16. 28	359. 13	5. 12	1. 13 N	3. 13 N
21	Th.	22	17. 13	11. 8	17. 2	5. 10	7. 2
22	F.	23	17. 57	22. 55	28. 48	8. 48	10. 28
23	Sa.	24	18. 42	34. 42	40. 38	12. 1	13. 26
24	*Su.*	25	19. 28	46. 36	52. 37	14. 42	15. 48
25	M.	26	20. 14	58. 42	64. 51	16. 45	17. 31
26	Tu.	27	21. 1	71. 3	77. 19	18. 6	18. 29
27	W.	28	21. 51	83. 38	89. 59	18. 39	18. 37
28	Th.	29	22. 40	96. 23	102. 48	18. 22	17. 54
29	F.	30	23. 29	109. 14	115. 40	17. 13	16. 20
30	Sa.	1	☌	122. 5	128. 30	15. 14	13. 57
31	*Su.*	2	0. 18	134. 53	141. 16	12. 29	10. 51

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid^{r}. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	F.	14. 57	15. 0	54. 53	55. 4	5158	5144
2	Sa.	15. 3	15. 7	55. 15	55. 28	5129	5112
3	*Su.*	15. 10	15. 14	55. 41	55. 56	5095	5076
4	M.	15. 19	15. 23	56. 11	56. 26	5056	5037
5	Tu.	15. 27	15. 32	56. 43	57. 0	5015	4994
6	W.	15. 37	15. 41	57. 17	57. 35	4972	4950
7	Th.	15. 46	15. 52	57. 53	58. 12	4927	4903
8	F.	15. 57	16. 2	58. 31	58. 50	4880	4856
9	Sa.	16. 7	16. 11	59. 8	59. 25	4834	4813
10	*Su.*	16. 16	16. 20	59. 42	59. 57	4793	4775
11	M.	16. 24	16. 27	60. 10	60. 21	4759	4746
12	Tu.	16. 29	16. 30	60. 29	60. 35	4736	4729
13	W.	16. 31	16. 30	60. 37	60. 35	4727	4729
14	Th.	16. 29	16. 25	60. 29	60. 20	4736	4747
15	F.	16. 23	16. 19	60. 7	59. 51	4763	4782
16	Sa.	16. 13	16. 7	59. 32	59. 10	4805	4832
17	*Su.*	16. 1	15. 54	58. 47	58. 22	4860	4891
18	M.	15. 47	15. 40	57. 57	57. 31	4922	4955
19	Tu.	15. 34	15. 27	57. 6	56. 41	4986	5018
20	W.	15. 20	15. 14	56. 17	55. 55	5049	5077
21	Th.	15. 9	15. 4	55. 35	55. 17	5103	5127
22	F.	15. 0	14. 56	55. 1	54. 48	5148	5165
23	Sa.	14. 53	14. 51	54. 37	54. 28	5179	5191
24	*Su.*	14. 49	14. 48	54. 22	54. 19	5199	5203
25	M.	14. 48	14. 48	54. 18	54. 19	5205	5203
26	Tu.	14. 49	14. 51	54. 22	54. 28	5199	5191
27	W.	14. 53	14. 55	54. 36	54. 45	5181	5169
28	Th.	14. 58	15. 1	54. 56	55. 8	5154	5138
29	F.	15. 5	15. 9	55. 21	55. 35	5122	5103
30	Sa.	15. 13	15. 17	55. 50	56. 5	5084	5064
31	*Su.*	15. 21	15. 25	56. 21	56. 36	5044	5025

Diſtances of ☽'s Center from Sun, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S	D. M. S.	D. M. S.	D. M. S.	D. M. S.
2	Spica ♍					82. 37. 56	81. 4. 38	79. 31. 9	77. 57. 31
3		76. 23. 42	74. 49. 43	73. 15. 34	71. 41. 13	70. 6. 42	68. 31. 59	66. 57. 5	65. 22. 0
4		63. 46. 44	62. 11. 17	60. 35. 39	58. 59. 49	57. 23. 47	55. 47. 33	54. 11. 6	52. 34. 27
5		50. 57. 36	49. 20. 33	47. 43. 18	46. 5. 50	44. 28. 10	42. 50. 16	41. 12. 8	39. 33. 48
6		37. 55. 15	36. 16. 30	34. 37. 31	32. 58. 20	31. 18. 56	29. 39. 19	27. 59. 28	26. 19. 25
7		24. 39. 8							
7	Antares.	70. 30. 33	68. 50. 49	67. 10. 51	65. 30. 39	63. 50. 14	62. 9. 36	60. 28. 44	58. 47. 40
8		57. 6. 23	55. 24. 53	53. 43. 11	52. 1. 18	50. 19. 14	48. 36. 59	46. 54. 34	45. 12. 0
9		43. 29. 19	41. 46. 29	40. 3. 34	38. 20. 36	36. 37. 37	34. 54. 33	33. 11. 34	31. 28. 44
10		29. 46. 7	28. 3. 48	26. 21. 50	24. 40. 17	22. 59. 15			
10	α Aquilæ.					74. 51. 39	73. 13. 48	71. 35. 56	69. 58. 3
11		68. 20. 12	66. 42. 27	65. 4. 51	63. 27. 25	61. 50. 12	60. 13. 13	58. 36. 35	57. 0. 19
12		55. 24 31	53. 49. 14	52. 14. 32	50. 40. 27	49. 7. 5			
12	α Pegaſi.					94. 37. 43	92. 51. 43	91. 5. 39	89. 19. 32
13		87. 33. 23	85. 47. 14	84. 1. 6	82. 15. 0	80. 28. 59	78. 43. 3	76. 57. 14	75. 11. 33
14		73. 26. 3	71. 40. 43	69. 55. 39	68. 10. 49	66. 26. 18	64. 42. 3	62. 58. 9	61. 14. 40
15		59. 31. 36	57. 48. 57	56. 6. 47	54. 25. 8	52. 44. 5	51. 3. 36	49. 23. 47	47. 44. 42
16		46. 6. 23	44. 28. 55	42. 52, 21	41. 16. 43	39. 42. 7			

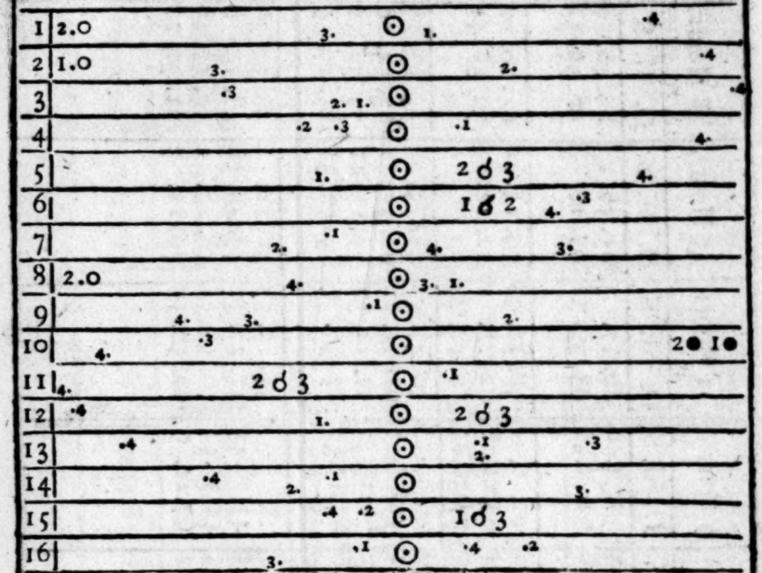
Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
16						81. 17. 10	79. 33. 30	77. 50. 15	76. 7.24
17		74. 24. 56	72. 42. 53	71. 1. 15	69.20. 2	67. 39. 15	65. 58. 55	64. 19. 1	62.39.35
18	α Arietis.	61. 0. 36	59. 22. 6	57. 44. 5	56. 6.34	54. 29. 32	52. 53. 1	51. 17. 2	49.41.34
19		48. 6. 39	46. 32. 16	44. 58. 28	43.25.15	41. 52. 38	40. 20. 39	38. 49. 19	37.18.38
20		35. 48. 38							
20	Aldebaran.	67. 22. 58	65. 47. 51	64. 13. 3	62.38.35	61. 4. 27	59. 30. 38	57. 57. 7	56.23.53
21		54. 50. 57	53. 18. 18	51. 45. 54	50.13.47	48. 41. 55	47. 10. 19	45. 38. 57	44. 7.48
22		42. 36. 53	41. 6. 11	39. 35. 39	38. 5.18	36. 35. 9			
19								120. 45. 43	119.17.30
20		117. 49. 36	116. 22. 2	114. 54. 48	113.27.52	112. 1. 15	110. 34. 59	109. 8. 58	107.43.14
21		106. 17. 47	104. 52. 37	103. 27. 43	102. 3. 1	100. 38. 37	99. 14. 28	97. 50. 32	96.26.50
22		95. 3. 21	93. 40. 4	92. 16. 57	90.54. 1	89. 31. 17	88. 8. 43	86. 46. 17	85.24. 1
23	The Sun.	84. 1. 53	82. 39. 54	81. 18. 0	79.56.14	78. 34. 34	77. 13. 0	75. 51. 29	74.30. 3
24		73. 8. 41	71. 47. 23	70. 26. 6	69. 4.52	67. 43. 40	66. 22. 30	65. 1. 19	63.40. 9
25		62. 18. 59	60. 57. 49	59. 36. 36	58.15.22	56. 54. 6	55. 32. 47	54. 11. 25	52.49.59
26		51. 28. 30	50. 6. 57	48. 45. 19	47.23.37	46. 1. 50	44. 39. 58	43. 18. 0	41.55.55
27		40. 33. 45							

Diſtances of ☽'s Center from Sun, and from Stars weſt of her.

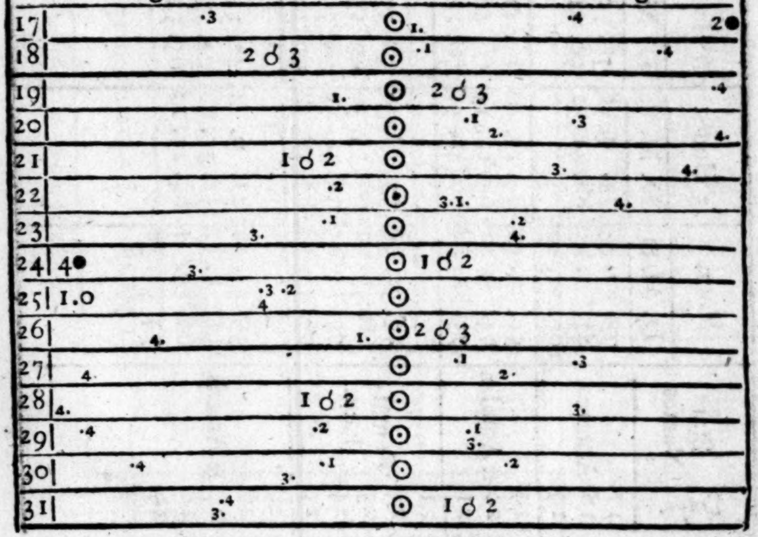
Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
4	The Sun.				39.22.17	40. 50. 26	42. 18. 51	43. 47. 30	45.16.24
5		46. 45. 32	48. 14. 54	49. 44. 31	51.14.22	52. 44. 28	54. 14. 50	55. 45. 26	57.16.17
6		58. 47. 22	60. 18. 41	61. 50. 16	63.22. 6	64. 54. 11	66. 26. 32	67. 59. 8	69.32. 1
7		71. 5. 8	72. 38. 31	74. 12. 11	75.46. 5	77. 20. 16	78. 54. 43	80. 29. 25	82. 4.24
8		83. 39. 39	85. 15. 11	86. 51. 0	88.27. 5	90. 3. 26	91. 40. 3	93. 16. 57	94.54. 6
9		96. 31. 32	98. 9. 14	99. 47. 12	101.25.27	103. 3. 57	104. 42. 44	106. 21. 46	108. 1. 3
10		109. 40. 35	111. 20. 22	113. 0. 23	114.40.37	116. 21. 5	118. 1. 47	119. 42. 40	121.23.46
8	Regulus.					49. 45. 12	51. 28. 52	53. 12. 50	54.57. 6
9		56. 41. 39	58. 26. 30	60. 11. 38	61.57. 3	63. 42. 45	65. 28. 45	67. 15. 0	69. 1.32
10		70. 48. 20	72. 35. 24	74. 22. 42	76.10.16	77. 58. 3	79. 46. 6	81. 34. 22	83.22.52
11		85. 11. 35							
11	Spica ♍	31. 34. 50	33. 23. 45	35. 12. 53	37. 2.13	38. 51. 46	40. 41. 31	42. 31. 24	44.21.28
12		46. 11. 42	48. 2. 5	49. 52. 35	51.43.10	53. 33. 53	55. 24. 41	57. 15. 32	59. 6.25
13		60. 57. 22	62. 48. 21	64. 39. 19	66.30.16	68. 21. 14	70. 12. 10	72. 3. 1	73.53.47
14		75. 44. 31							
14	Antares.	31. 1. 17	32. 47. 48	34. 34. 29	3621.21	38. 8. 26	39. 55. 37	41. 42. 47	43.30. 0
15		45. 17. 13	47. 4. 21	48. 51. 20	5038.11	52. 24. 57	54. 11. 31	55. 57. 51	57.43.58
16		59. 29. 53	61. 15. 31	63. 0. 53	64.45.57	66. 30. 45	68. 15. 14	69. 59. 24	71.43.12

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
17	Antares.	73. 26. 43	75. 9. 48	76. 52. 34	78. 34. 59	80. 17. 3	81. 58. 43	83. 40. 0	85. 20. 54
18		87. 1. 25	88. 41. 32	90. 21. 16	92. 0. 36	93. 39. 32	95. 18. 4	96. 56. 13	98. 33. 58
19		100. 11. 18							
19	α Aquilæ.	52. 52. 55	54. 17. 10	55. 41. 32	57. 6. 1	58. 30. 38	59. 55. 20	61. 20. 2	62. 44. 46
20		64. 9. 32	65. 34. 15	66. 58. 54	68. 23. 28	69. 48. 0	71. 12. 24	72. 36. 41	74. 0. 51
21		75. 24. 55	76. 48. 51	78. 12. 37	79. 36. 15	80. 59. 44			
21	Fomal-haut.					50. 47. 51	52. 5. 26	53. 23. 17	54. 41. 24
22		55. 59. 50	57. 18. 30	58. 37. 21	59. 56. 23	61. 15. 38	62. 35. 1	63. 54. 29	65. 14. 6
23		66. 33. 50	67. 53. 39	69. 13. 32	70. 33. 30	71. 53. 34	73. 13. 41	74. 33. 52	75. 54. 6
24		77. 14. 23	78. 34. 43	79. 55. 6	81. 15. 32	82. 36. 0	83. 56. 31	85. 17. 5	86. 37. 40
25		87. 58. 18	89. 18. 58	90. 39. 40	92. 0. 23	93. 21. 8			
25	α Arietis.					34. 5. 33	35. 28. 53	36. 52. 36	38. 16. 42
26		39. 41. 12	41. 6. 4	42. 31. 13	43. 56. 43	45. 22. 32	46. 48. 38	48. 15. 0	49. 41. 39
27		51. 8. 35	52. 35. 46	54. 3. 13	55. 30. 54	56. 58. 51	58. 27. 2	59. 55. 27	61. 24. 7
28		62. 53. 1	64. 22. 10	65. 51. 32	67. 21. 9	68. 50. 59	70. 21. 3	71. 51. 22	73. 21. 53
29		74. 52. 38							

Configurations of the SATELLITES of JUPITER at Half an Hour past Nine o' Clock in the Evening.



Configurations at Nine o' Clock in the Evening.



Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	M.	Lammas-Day.
2	Tu.	
3	W.	
4	Th.	
5	F.	
6	Sa.	Transfig. of our Lord.
7	*Su.*	*7th Sunday after Trinity.*
8	M.	[Name of Jeſus
9	Tu.	
10	W.	St. Lawrence.
11	Th.	*Prs. of Brunſwick born.*
12	F.	*Pr. of Wales born, 1762.*
13	Sa.	
14	*Su.*	*8th Sunday after Trinity.*
15	M.	
16	Tu.	*Pr. Frederick born.*
17	W.	
18	Th.	
19	F.	
20	Sa.	
21	*Su.*	*9th Sunday after Trinity.*
22	M.	*[Pr. W. Henry born.*
23	Tu.	
24	W.	*St. Bartholomew.*
25	Th.	
26	F.	
27	Sa.	[St. Aug.
28	*Su.*	*10th Sunday after Trinity.*
29	M.	St. John Bap. beheaded.
30	Tu.	
31	W.	

Phaſes of the Moon.

	D. H. M.
Firſt Quarter – –	6. 17. 26
Full Moon – –	13. 11. 37
Laſt Quarter – –	21. 4. 30
New Moon – –	29. 0. 33

Other Phenomena.

D.H.M.	
2.22. 2	☾ υ ♌
3. 6.36	☾ ♀
7. 6.17	☾ 4 ad ζ ♎
10.15	☾ η ♎
14.27	☾ θ ♎
12. 1.40	☾ β ♑
14. 3.51	☾ θ ♒ [38′.
15.	☿ χ ♌ diff. Lat.
17.	♃ η ♍ diff. Lat.
17.50	☾ ζ ♓ [13′.
18.	♂ δ ♊ diff. Lat.
21.15.39	☾ 1 ad δ ♉ [55′.
16.10	☾ 2 ad δ ♉
22.18.48	☉ enters ♍
27. 1.29	☾ 1 ad α ♋
2.29	☾ 2 ad α ♋
7.10	☾ κ ♋
22. 2	☾ ο ♌
30.23. 8	Im. of ☿ * 12′½ N. of ☾'s cent.
23.59½	Em. * 12′½ N.
31.	♀ ι ♍ diff. Lat. [30′.

AUGUST 1791.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Aſc. in Time.	Sun's Declin. North.	Equat. of Time. Add.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	M.	4. 9. 4.13	8. 46. 2,2	18. 0.24	5. 53,8	3,7
2	Tu.	4. 10. 1.42	8. 49 55,0	17.45. 6	5. 50,1	4,3
3	W.	4. 10.59.11	8. 53.47,2	17.29.30	5. 45,8	4,9
4	Th.	4. 11.56.41	8. 57.38,9	17.13.37	5. 40,9	5,6
5	F.	4. 12.54.12	9. 1.29,9	16.57.27	5. 35,3	6,2
6	Sa.	4. 13.51.44	9. 5.20,2	16.41. 0	5. 29,1	6,8
7	*Su.*	4. 14.49.17	9. 9.10,0	16.24.18	5. 22,3	7,4
8	M.	4. 15.46.50	9. 12.59,1	16. 7.20	5. 14,9	7,9
9	Tu.	4. 16.44.25	9. 16.47,8	15.50. 6	5. 7,0	8,5
10	W.	4. 17.42. 0	9. 20.35,7	15.32.37	4. 58,5	9,1
11	Th.	4. 18.39.36	9. 24.23,1	15.14.54	4. 49,4	9,7
12	F.	4. 19.37.13	9. 28. 9,9	14.56.56	4. 39,7	10,3
13	Sa.	4. 20.34.51	9. 31.56,1	14.38.43	4. 29,4	10,9
14	*Su.*	4. 21.32.30	9. 35.41,8	14.20.16	4. 18,5	11,4
15	M.	4. 22.30.10	9. 39.26,9	14. 1.36	4. 7,1	11,9
16	Tu.	4. 23.27.52	9. 43.11,5	13.42.43	3. 55,2	12,4
17	W.	4. 24.25.36	9. 46.55,7	13.23.36	3. 42,8	12,9
18	Th.	4. 25.23.21	9. 50.39,3	13. 4.16	3. 29,9	13,4
19	F.	4. 26.21. 8	9. 54.22,4	12.44.44	3. 16,5	13,8
20	Sa.	4. 27.18.57	9. 58. 5,1	12.25. 0	3. 2,7	14,3
21	*Su.*	4. 28.16.47	10. 1.47,4	12. 5. 4	2. 48,4	14,7
22	M.	4. 29.14 39	10. 5.29,2	11.44.56	2. 33,7	15,1
23	Tu.	5. 0.12.33	10. 9.10,5	11.24.36	2. 18,6	15,6
24	W.	5. 1.10.29	10. 12.51,4	11. 4. 5	2. 3,0	16,0
25	Th.	5. 2. 8.27	10. 16.32,0	10.43.24	1. 47,0	16,4
26	F.	5. 3. 6.26	10. 20.12,2	10.22.33	1. 30,6	16,7
27	Sa.	5. 4. 4.27	10. 23.52,0	10. 1.32	1. 13,9	17,1
28	*Su.*	5. 5. 2.30	10. 27.31,4	9.40.21	0. 56,8	17,4
29	M.	5. 6. 0.35	10. 31.10,4	9.19. 0	0. 39,4	17,8
30	Tu.	5. 6.58.41	10. 34.49,1	8.57.30	0. 21,6	18,1
31	W.	5. 7.56.49	10. 38.27,5	8.35.52	0. 3,5	

Days.	Semidiameter of the Sun.	Time of ☽ paſſing the Meridian.	Hourly Motion of the Moon.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	15. 49,0	1. 6,5	2. 23,6	0. 006281	6. 16. 3
7	15. 49,9	1. 6,0	2. 23,9	0. 005866	6. 15. 44
13	15. 50,9	1. 5,5	2. 24,2	0. 005392	6. 15. 25
19	15. 52,1	1. 5,1	2. 24,6	0. 004884	6. 15. 6
25	15. 53,3	1. 4,7	2. 24,9	0. 004333	6. 14. 47

ECLIPSES OF THE SATELLITES OF JUPITER.

I. Satellite.
Emerſions.

Days	H. M. S.
2	11. 1. 50
4	5. 30. 34
5	23. 59. 19
7	18. 28. 5
9	12. 56. 54
11	7. 25. 44
13	1. 54. 35
14	20. 23. 28
16	14. 52. 22
18	9. 21. 19
20	3. 50. 16
21	22. 19. 14
23	16. 48. 13
25	11. 17. 14
27	5. 46. 15
29	0. 15. 17
30	18. 44. 20

II. Satellite.
Emerſions.

Days	H. M. S.
4	7. 11. 59
7	20. 30. 55
11	9. 49. 57
14	23. 9. 5
18	12. 28. 19
22	1. 47. 37
25	15. 7. 1
29	4. 26. 28

III. Satellite.

Days	H. M. S.	
6	2. 23. 2	I
6	4. 49. 5	E
13	6. 23. 0	I
13	8. 48. 5	E
20	10. 23. 24	I
20	12. 47. 23	E
27	14. 24. 6	I
27	16. 47. 2	E

IV. Satellite.

Days	H. M. S.	
10	13. 23. 34	I
10	15. 14. 27	E
27	7. 30. 10	I
27	9. 8. 22	E

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
			MERCURY.			
1	5. 0. 15	6. 47 N	4. 14. 28	1. 46 N	18. 12 N	0. 24
4	5. 14. 6	6. 10	4. 20. 21	1. 42	16. 20	0. 36
7	5. 26. 41	5. 19	4. 26. 1	1. 33	14. 19	0. 46
10	6. 8. 11	4. 18	5. 1. 27	1. 20	12. 12	0. 55
13	6. 18. 46	3. 12	5. 6. 40	1. 3	10. 2	1. 4
16	6. 28. 38	2. 5	5. 11. 40	0. 43	7. 51	1. 10
19	7. 7. 56	0. 58 N	5. 16. 27	0. 21 N	5. 40	1. 16
22	7. 16. 48	0. 7 S	5. 21. 1	0. 3 S	3. 31	1. 22
25	7. 25. 21	1. 10	5. 25. 22	0. 28	1. 25 N	1. 26
28	8. 3. 42	2. 9	5. 29. 31	0. 54	0. 38 S	1. 29
31	8. 11. 57	3. 5	6. 3. 25	1. 20	2. 35	1. 32
			VENUS. Gr. Elong. 10ᵈ.			
1	8. 20. 40	0. 21 S	5. 24. 40	0. 20 S	1. 49 N	2. 54
7	9. 0. 11	0. 54	6. 0. 40	0. 55	1. 6 S	2. 52
13	9. 9. 40	1. 26	6. 6. 25	1. 34	3. 59	2. 49
19	9. 19. 9	1. 55	6. 11. 54	2. 16	6. 47	2. 46
25	9. 28. 38	2. 22	6. 17. 2	3. 1	9. 29	2. 42
			MARS.			
1	2. 12. 13	0. 45 N	3. 4. 20	0. 31 N	23. 55 N	21. 32
7	2. 15. 17	0. 51	3. 8. 18	0. 35	23. 47	21. 26
13	2. 18. 20	0. 56	3. 12. 14	0. 39	23. 33	21. 21
19	2. 21. 20	1. 1	3. 16. 7	0. 43	23. 13	21. 15
25	2. 24. 19	1. 6	3. 19. 59	0. 48	22. 46	21. 10
			JUPITER.			
1	6. 7. 4	1. 19 N	5. 28. 53	1. 11 N	1. 32 N	3. 11
7	6. 7. 31	1. 19	5. 29. 57	1. 11	1. 6	2. 52
13	6. 7. 58	1. 19	6. 1. 3	1. 10	0. 39	2. 33
19	6. 8. 26	1. 19	6. 2. 12	1. 9	0. 11 N	2. 15
25	6. 8. 53	1. 19	6. 3. 22	1. 9	0. 18 S	1. 57
			SATURN.			
1	0. 13. 6	2. 29 S	0. 18. 56	2. 35 S	5. 2 N	16. 25
7	0. 13. 19	2. 29	0. 18. 53	2. 37	4. 59	16. 2
13	0. 13. 31	2. 29	0. 18. 46	2. 38	4. 55	15. 39
19	0. 13. 44	2. 29	0. 18. 37	2. 40	4. 50	15. 16
25	0. 13. 56	2. 29	0. 18. 24	2. 41	4. 44	14. 53

AUGUST 1791.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D.M.S.
1	M.	4. 26.41.51	5. 3.15.41	3.46.22 S	3.21.48 S
2	Tu.	5. 9.52.24	5. 16.31.52	2.54.19	2.24.12
3	W.	5. 23.14. 4	5. 29.58.52	1.51.52	1.17.42
4	Th.	6. 6.46.19	6. 13.36.19	0.42.10 S	0. 5.46 S
5	F.	6. 20.28.55	6. 27.24. 6	0.30.58 N	1. 7.29 N
6	Sa.	7. 4.21.52	7. 11.22.12	1.43.15	2.17.41
7	*Su.*	7. 18.25. 3	7. 25.30.17	2.50.14	3.20.20
8	M.	8. 2.37.46	8. 9.47.14	3.47.28	4.11. 9
9	Tu.	8. 16.58.20	8. 24.10.39	4.30.58	4.46.32
10	W.	9. 1.23.37	9. 8.36.38	4.57.34	5. 3.53
11	Th.	9. 15.49. 0	9. 23. 0. 2	5. 5.21	5. 2. 0
12	F.	10. 0. 8.58	10. 7.15. 2	4.53.57	4.41.23
13	Sa.	10. 14.17.37	10. 21.16. 2	4.24.37	4. 4. 2
14	*Su.*	10. 28. 9.48	11. 4.58.29	3.40. 4	3.13.12
15	M.	11. 11.41.50	11. 18.19.40	2.43.57	2.12.48
16	Tu.	11. 24.51.57	0. 1.18.47	1.40.17	1. 6.53 N
17	W.	0. 7.40.21	0. 13.56.58	0.33. 2 N	0. 0.48 S
18	Th.	0. 20. 9. 0	0. 26.16.55	0.34.15 S	1. 6.58
19	F.	1. 2.21.14	1. 8.22.32	1.38.37	2. 8.55
20	Sa.	1. 14.21.24	1. 20.18.26	2.37.36	3. 4.25
21	*Su.*	1. 26.14.19	2. 2. 9.39	3.29.11	3.51.38
22	M.	2. 8. 5. 6	2. 14. 1.17	4.11.38	4.28.56
23	Tu.	2. 19.58.45	2. 25.58.10	4.43.25	4.54.52
24	W.	3. 1.59.58	3. 8. 4.41	5. 3. 8	5. 8. 4
25	Th.	3. 14.12.44	3. 20.24.26	5. 9.32	5. 7.24
26	F.	3. 26.40. 6	4. 2.59.57	5. 1.35	4.52. 2
27	Sa.	4. 9.24. 6	4. 15.52.36	4.38.43	4.21.40
28	*Su.*	4. 22.25.26	4. 29. 2.30	4. 1. 1	3.36.54
29	M.	5. 5.43.34	5. 12.28.30	3. 9.33	2.39.16
30	Tu.	5. 19.16.56	5. 26. 8.37	2. 6.26	1.31.25
31	W.	6. 3. 3. 9	6. 10. 0.13	0.54.48	0.17. 6

AUGUST 1791. VI.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Passage over Merid. H. M.	☽'s Right Ascen. at Noon. D. M.	☽'s Right Asc. at Midn. D. M.	☽'s Declination at Noon. D. M.	☽'s Declination at Midn. D. M.
1	M.	3	1. 7	147. 38	153.58	9. 5 N	7. 11 N
2	Tu.	4	1. 55	160, 19	166.40	5. 11	3. 6 N
3	W.	5	2. 44	173. 3	179.28	0. 59 N	1. 11 S
4	Th.	6	3. 33	185. 56	192.29	3. 20 S	5. 28
5	F.	7	4. 24	199. 7	205.51	7. 32	9. 31
6	Sa.	8	5. 17	212. 41	219.40	11. 22	13. 4
7	*Su.*	9	6. 12	226. 46	233.59	14. 36	15. 55
8	M.	10	7. 9	241. 20	248.47	16. 59	17. 48
9	Tu.	11	8. 8	256. 19	263.53	18. 20	18. 34
10	W.	12	9. 7	271. 28	279. 2	18. 30	18. 8
11	Th.	13	10. 5	286. 32	293.57	17. 28	16. 32
12	F.	14	11. 1	301. 16	308.26	15. 21	13. 56
13	Sa.	15	11. 55	315. 27	322.20	12. 20	10. 34
14	*Su.*	16	12. 46	329. 3	335.38	8. 41	6. 42
15	M.	17	13. 35	342. 5	348.24	4. 39	2. 35 S
16	Tu.	18	14. 22	354. 38	0.46	0. 30 S	1. 33 N
17	W.	19	15. 8	6. 50	12.50	3. 33 N	5. 30
18	Th.	20	15. 54	18. 49	24.47	7. 22	9. 7
19	F.	21	16. 39	30. 44	36.42	10. 46	12. 17
20	Sa.	22	17. 25	42. 42	48.43	13. 39	14. 52
21	*Su.*	23	18. 12	54. 46	60.53	15. 56	16. 50
22	M.	24	18. 59	67. 2	73.14	17. 32	18. 3
23	Tu.	25	19. 47	79. 28	85.46	18. 22	18. 29
24	W.	26	20. 36	92. 6	98.28	18. 23	18. 5
25	Th.	27	21. 25	104. 52	111.17	17. 34	16. 51
26	F.	28	22. 15	117. 42	124. 8	15. 55	14. 46
27	Sa.	29	23. 4	130. 35	137. 1	13. 26	11. 55
28	*Su.*	30	23. 53	143. 28	149.54	10. 15	8. 26
29	M.	1	☌	156. 21	162.49	6. 29	4. 26
30	Tu.	2	0. 44	169. 19	175.51	2. 18 N	0. 8 N
31	W.	3	1. 35	182. 26	189. 5	2. 3 S	4. 14 S

AUGUST 1791.

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid^{r}. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	M.	15. 30	15. 34	56. 52	57. 8	5004	4984
2	Tu.	15. 38	15. 42	57. 23	57. 38	4965	4946
3	W.	15. 46	15. 50	57. 52	58. 6	4928	4911
4	Th.	15. 54	15. 57	58. 19	58. 32	4895	4878
5	F.	16. 0	16. 3	58. 44	58. 55	4864	4850
6	Sa.	16. 6	16. 9	59. 6	59. 16	4837	4824
7	*Su.*	16. 11	16. 13	59. 25	59. 32	4813	4805
8	M.	16. 15	16. 17	59. 39	59. 44	4797	4790
9	Tu.	16. 17	16. 18	59. 47	59. 48	4787	4786
10	W.	16. 17	16. 16	59. 47	59. 43	4787	4792
11	Th.	16. 15	16. 13	59. 38	59. 30	4798	4808
12	F.	16. 10	16. 6	59. 19	59. 6	4821	4837
13	Sa.	16. 2	15. 57	58. 51	58. 34	4855	4876
14	*Su.*	15. 52	15. 47	58. 15	57. 55	4900	4924
15	M.	15. 41	15. 35	57. 34	57. 12	4951	4979
16	Tu.	15. 30	15. 24	56. 51	56. 30	5005	5032
17	W.	15. 18	15. 13	56. 9	55. 49	5059	5085
18	Th.	15. 8	15. 3	55. 31	55. 14	5108	5130
19	F.	14. 59	14. 56	54. 59	54. 47	5150	5166
20	Sa.	14. 53	14. 51	54. 38	54. 31	5178	5187
21	*Su.*	14. 50	14. 49	54. 26	54. 24	5194	5197
22	M.	14. 49	14. 50	54. 24	54. 26	5197	5194
23	Tu.	14. 52	14. 54	54. 31	54. 39	5187	5177
24	W.	14. 56	15. 0	54. 49	55. 1	5163	5148
25	Th.	15. 3	15. 7	55. 15	55. 30	5129	5110
26	F.	15. 12	15. 17	55. 47	56. 5	5087	5064
27	Sa.	15. 22	15. 27	56. 24	56. 43	5040	5015
28	*Su.*	15. 32	15. 38	57. 2	57. 21	4991	4967
29	M.	15. 43	15. 48	57. 40	57. 58	4943	4921
30	Tu.	15. 52	15. 56	58. 15	58. 30	4900	4881
31	W.	16. 0	16. 3	58. 43	58. 54	4865	4852

Diſtances of ☽'s Center from Sun, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D.M.S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Spica ♍	54. 11. 16	52. 33. 15	50. 55. 3	49.16.39	47. 38. 4	45. 59. 17	44. 20. 19	42.41.10
2		41. 1. 51	39. 22. 21	37. 42. 40	36. 2.49	34. 22. 47	32. 42. 35	31. 2. 14	29.21.44
3		27. 41. 6	26. 0. 21	24. 19. 30	22.38.33	20. 57. 29			
3	Antares.					66. 50. 55	65. 10. 18	63. 29. 34	61.48.42
4		60. 7. 42	58. 26. 35	56. 45. 22	55. 4. 4	53. 22. 40	51. 41. 11	49. 59. 38	48.18. 2
5		46. 36. 22	44. 54. 40	43. 12. 58	41.31.17	39. 49. 39	38. 8. 2	36. 26. 31	34.45. 8
6		33. 3. 57	31. 23. 1	29. 42. 24	28. 2. 8	26. 22. 13			
6	α Aquilæ					77. 57. 21	76. 21. 34	74. 45. 48	73.10. 4
7		71. 34. 22	69. 58. 46	68. 23. 19	66.48. 2	65. 12. 54	63. 37. 59	62. 3. 19	60.28.59
8		58. 54. 57	57. 21. 18	55. 48. 7	54.15.24	52. 43. 10			
8	α Pegaſi.					98. 44. 50	97. 2. 17	95. 19. 38	93.36.54
9		91. 54. 6	90. 11. 14	88. 28. 20	86.45.24	85. 2. 28	83. 19. 30	81. 36. 34	79.53.40
10		78. 10. 49	76. 28. 2	74. 45. 22	73. 2.49	71. 20. 23	69. 38. 7	67. 56. 3	66.14.11
11		64. 32. 32	62. 51. 7	61. 10. 0	59.29.12	57. 48. 43	56. 8. 35	54. 28. 54	52.49.41
12		51. 10. 57	49. 32. 44	47. 55. 7	46.18.10	44. 41. 56	43. 6. 28	41. 31. 53	39.58.10
13		38. 25. 23							
13	α Arietis.	79. 51. 31	78. 8. 58	76. 26. 42	74.44.42	73. 2. 59	71. 21. 35	69. 40. 30	67.59.45
14		66. 19. 20	64. 39. 16	62. 59. 34	61.20.14	59. 41. 18	58. 2. 46	56. 24. 39	54.46.58

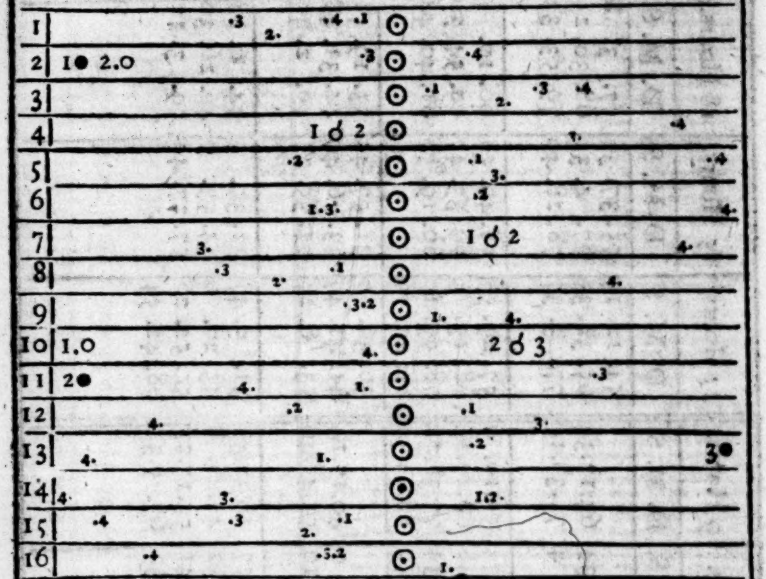
Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
15	*α* Arietis.	53. 9. 43	51. 32. 55	49. 56. 35	48. 20. 45	46. 45. 26	45. 10. 38	43. 36. 23	42. 2. 43
16		40. 29. 40	38. 57. 15	37. 25. 30	35. 54. 27	34. 24. 5			
16	Aldebaran.					65. 48. 23	64. 12. 11	62. 36. 18	61. 0. 44
17		59. 25. 29	57. 50. 33	56. 15. 55	54. 41. 34	53. 7. 31	51. 33. 46	50. 0. 17	48. 27. 5
18		46. 54. 10	45. 21. 30	43. 49. 6	42. 16. 57	40. 45. 3	39. 13. 23	37. 41. 57	36. 10. 45
19		34. 39. 46							
19	Pollux.	78. 16. 25	76. 47. 34	75. 18. 56	73. 50. 30	72. 22. 16	70. 54. 14	69. 26. 23	67. 58. 44
20		66. 31. 16	65. 3. 58	63. 36. 51	62. 9. 54	60. 43. 7	59. 16. 30	57. 50. 2	56. 23. 43
21		54. 57. 33							
18	The Sun.					119. 34. 57	118. 10. 43	116. 46. 42	115. 22. 53
19		113. 59. 16	112. 35. 51	111. 12. 37	109. 49. 34	108. 26. 42	107. 3. 59	105. 41. 25	104. 19. 0
20		102. 56. 43	101. 34. 34	100. 12. 32	98. 50. 36	97. 28. 47	96. 7. 3	94. 45. 23	93. 23. 47
21		92. 2. 15	90. 40. 46	89. 19. 20	87. 57. 56	86. 36. 32	85. 15. 9	83. 53. 46	82. 32. 23
22		81. 10. 59	79. 49. 33	78. 28. 5	77. 6. 34	75. 45. 0	74. 23. 22	73. 1. 39	71. 39. 52
23		70. 17. 59	68. 56. 0	67. 33. 54	66. 11. 40	64. 49. 19	63. 26. 50	62. 4. 12	60. 41. 25
24		59. 18. 29	57. 55. 22	56. 32. 5	55. 8. 37	53. 44. 57	52. 21. 5	50. 57. 1	49. 32. 45
25		48. 8. 16	46. 43. 34	45. 18. 39	43. 53. 30	42. 28. 7	41. 2. 30	39. 36. 38	
30	Antares.					72. 39. 20	68. 56. 58	67. 14. 26	65. 31. 46
31		63. 48. 57	62. 6. 1	60. 23. 0	58. 39. 53	56. 56. 40	55. 13. 23	53. 30. 4	51. 46. 42
S. 1		50. 3. 18							

Diſtances of ☽'s Center from Sun, and from Stars weſt of her.

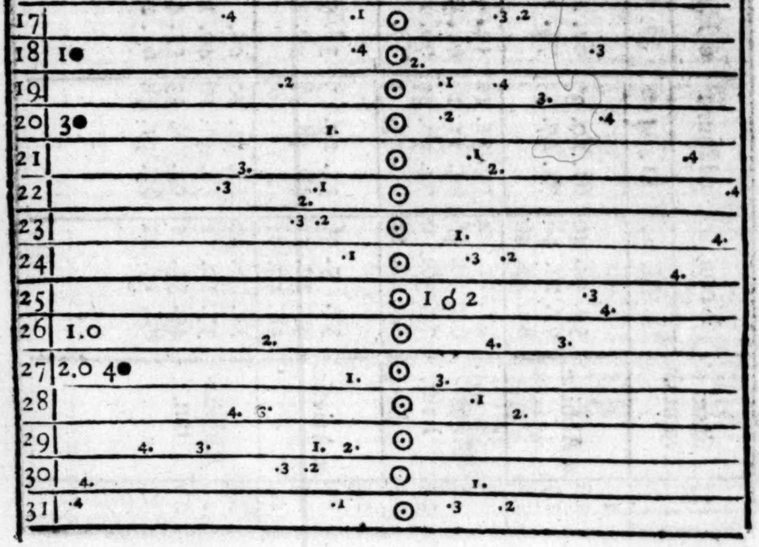
Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
2	The Sun.							39. 10. 46	40.43.42
3		42. 16. 53	43. 50. 16	45. 23. 52	46.57.41	48. 31. 43	50. 5. 57	51. 40. 22	53.14.59
4		54. 49. 48	56. 24. 48	57. 59. 59	59.35.20	61. 10. 52	62. 46. 35	64. 22. 28	65.58.32
5		67. 34. 46	69. 11. 10	70. 47. 44	72.24.27	74. 1. 20	75. 38. 22	77. 15. 33	78.52.54
6		80. 30. 24	82. 8. 3	83. 45. 50	85.23.46	87. 1. 50	88. 40. 3	90. 18. 24	91.56.53
7		93. 35. 30	95. 14. 14	96. 53. 5	98.32. 4	100. 11. 10	101. 50. 23	103. 29. 42	105. 9. 7
8		106. 48. 39	108. 28. 16	110. 7. 58	111.47.45	113. 27. 36	115. 7. 32	116. 47. 32	118.27.36
9		120. 7. 43							
7	Spica ♍	27. 54. 11	29. 39. 58	31. 25. 55	33.12. 1	34. 58. 16	36. 44. 39	38. 31. 11	40.17.51
8		42. 4. 38	43. 51. 32	45. 38. 32	47.25.38	49. 12. 50	51. 0. 8	52. 47. 30	54.34.57
9		56. 22. 29	58. 10. 4	59. 57. 41	61.45.21	63. 33. 3	65. 20. 47	67. 8. 32	68.56.18
10		70. 44. 4							
10	Antares.	26. 17. 6	27. 59. 12	29. 41. 45	31.24.46	33. 8. 16	34. 52. 8	36. 36. 14	38.20.34
11		40. 5. 10	41. 49. 50	43. 34. 34	45.19.23	47. 4. 17	48. 49. 11	50. 34. 1	52.18.51
12		54. 3. 38	55. 48. 19	57. 32. 54	59.17.22	61. 1. 43	62. 45. 55	64. 29. 56	66.13.47
13		67. 57. 28	69. 40. 56	71. 24. 11	73. 7.12	74. 50. 0	76. 32. 33	78. 14. 51	79.56.53
14		81. 38. 39	83. 20. 8	85. 1. 20	86.42.14	88. 22. 51	90. 3. 9	91. 43. 8	93.22.48
15		95. 2. 8	96. 41. 9	98. 19. 50	99.58.11	101. 36. 13			

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S	D. M. S.	D. M. S.	D. M. S.
15	α Aquilæ.					54. 12. 13	55. 37. 36	57. 3. 8	58.28.49
16		59. 54. 40	61. 20. 37	62. 46. 34	64.12.34	65. 38. 35	67. 4. 32	68. 30. 25	69.56.14
17		71. 21. 58	72. 47. 35	74. 13. 4	75.38.25	77. 3. 37	78. 28. 40	79. 53. 33	81.18.15
18		82. 42. 46							
18	Fomal-haut.	52. 12. 4	53. 31. 12	54. 50. 34	56.10. 9	57. 29. 58	58. 49. 57	60. 10. 5	61.30.22
19		62. 50. 46	64. 11. 15	65. 31. 48	66.52.24	68. 13. 4	69. 33. 47	70. 54. 30	72.15.14
20		73. 36. 0	74. 56. 47	76. 17. 34	77.38.22	78. 59. 10	80. 19. 57	81. 40. 44	83. 1.31
21		84. 22. 18	85. 43. 4	87. 3. 49	88.24.34	89. 45. 18			
21	α Arietis.					30. 36. 0	31. 57. 43	33. 19. 53	34.42.30
22		36. 5. 36	37. 29. 7	38. 53. 0	40.17.14	41. 41. 49	43. 6. 40	44. 31. 48	45.57.14
23		47. 22. 57	48. 48. 56	50. 15. 10	51.41.40	53. 8. 25	54. 35. 25	56. 2. 40	57.30. 9
24		58. 57. 51							
24	Aldeba-ran.	25. 0. 56	26. 31. 20	28. 1. 57	29.32.46	31. 3. 47	32. 35. 1	34. 6. 28	35.38. 8
25		37. 10. 2	38. 42. 10	40. 14. 32	41.47. 8	43. 20. 0	44. 53. 7	46. 26. 30	48. 0. 8
26		49. 34. 2	51. 8. 13	52. 42. 41	54.17.25	55. 52. 26	57. 27. 44	59. 3. 19	60.39.11
27		62. 15. 21	63. 51. 48	65. 28. 32	67. 5.34	68. 42. 54			

Configurations of the SATELLITES of JUPITER at Eight o'Clock in the Evening.



Configurations at Half an Hour past Seven o'Clock.



I. SEPTEMBER 1791.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Th.	Giles.
2	F.	Lond. burnt 1666, O.S.
3	Sa.	
4	*Su.*	*11th Sunday after Trinity.*
5	M.	
6	Tu.	
7	W.	Enurchus.
8	Th.	Nativity of B. V. Mary.
9	F.	
10	Sa.	
11	*Su.*	*12th Sunday after Trinity.*
12	M.	
13	Tu.	
14	W.	Holy Croſs.
15	Th.	
16	F.	
17	Sa.	Lambert.
18	*Su.*	*13th Sunday after Trinity.*
19	M.	
20	Tu.	
21	W.	*St. Matthew.*
22	Th.	K. *Geo.* III. *crown'd* 1761.
23	F.	
24	Sa.	
25	*Su.*	*14th Sunday after Trinity.*
26	M.	St. Cyprian.
27	Tu.	
28	W.	
29	Th.	*St. Mich. Prs. Char. Aug.*
30	F.	St. Jerome. [*born.*

Phaſes of the Moon.

	D. H. M.
Firſt Quarter --	4. 22. 37
Full Moon ---	11. 23. 3
Laſt Quarter --	19. 23. 11
New Moon --	27. 11. 43

Other Phenomena.

D.H.M.	
3.11.45	☾ 4 ad ζ ♎
11.55	☾ γ ♎
15.42	☾ η ♎
19.55	☾ θ ♎
8. 9. 5	☾ β ♑
10.12.57½	Im. of θ ♒ * 8′¾ S. of ☾'s cent.
13.55	Em. * 9′½ S.
14. 2.34	☾ ζ ♓
17.23.49	☾ 1 ad δ ♉
18. 0.20	☾ 2 ad δ ♉
5.44	☾ α ♉
21.	☿ Stationary.
22.15.15	☉ enters ♎
23.10.44	☾ 1 ad α ♋
11.45	☾ 2 ad α ♋
16.28	☾ γ ♋
24. 7.24	☾ b ♌
16.38	☾ π ♌
26.14. 7	☾ υ ♌
27.	☉ ecl inviſible.
28.	♀ Stationary.
29.12.35	☾ λ ♍
30.18.23	☾ 4 ad ζ ♎
18.34	☾ γ ♎
22.15	☾ η ♎

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Asc. in Time.	Sun's Declin. North.	Equat. of Time. Sub.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	Th.	5. 8.54.59	10. 42. 5,6	8. 14. 6	0. 15,0	
2	F.	5. 9.53.10	10. 45.43,3	7. 52. 12	0. 33,7	18,7
3	Sa.	5. 10.51.22	10. 49.20,8	7. 30. 10	0. 52,7	19,0
4	*Su.*	5. 11.49.36	10. 52.58,0	7. 8. 1	1. 12,0	19,3
5	M.	5. 12.47.51	10. 56.34,9	6. 45. 46	1. 31,6	19,6
6	Tu.	5. 13.46. 8	11. 0.11,6	6. 23. 24	1. 51,4	19,8
7	W.	5. 14.44.26	11. 3.48,1	6. 0. 55	2. 11,4	20,0
8	Th.	5. 15.42.46	11. 7.24,4	5. 38. 20	2. 31,7	20,3
9	F.	5. 16.41. 7	11. 11. 0,5	5. 15. 40	2. 52,2	20,5
10	Sa.	5. 17.39.30	11. 14.36,4	4. 52. 55	3. 12,8	20,6
11	*Su.*	5. 18.37.55	11. 18.12,1	4. 30. 5	3. 33,5	20,7
12	M.	5. 19.36.21	11. 21.47,7	4. 7. 10	3. 54,3	20,8
13	Tu.	5. 20.34.49	11. 25.23,3	3. 44. 11	4. 15,3	21,0
14	W.	5. 21.33.19	11. 28.58,8	3. 21. 8	4. 36,3	21,0
15	Th.	5. 22.31.51	11. 32.34,2	2. 58. 1	4. 57,4	21,1
16	F.	5. 23.30.25	11. 36. 9,6	2. 34. 51	5. 18,5	21,1
17	Sa.	5. 24.29. 1	11. 39.45,0	2. 11. 37	5. 39,6	21,1
18	*Su.*	5. 25.27.40	11. 43.20,4	1. 48. 20	6. 0,6	21,0
19	M.	5. 26.26.21	11. 46.55,9	1. 25. 1	6. 21,6	21,0
20	Tu.	5. 27.25. 4	11. 50.31,4	1. 1. 40	6. 42,6	21,0
21	W.	5. 28.23.50	11. 54. 7,1	0. 38. 17	7. 3,5	20,9
22	Th.	5. 29.22.38	11. 57.42,9	0. 14. 52	7. 24,2	20,7
23	F.	6. 0.21.28	12. 1.18,8	SOUTH. 0. 8. 33	7. 44,8	20,6
24	Sa.	6. 1.20.20	12. 4.54,8	0. 31. 59	8. 5,2	20,4
25	*Su.*	6. 2.19.15	12. 8.31,0	0. 55. 26	8. 25,5	20,3
26	M.	6. 3.18.12	12. 12. 7,4	1. 18. 53	8. 45,7	20,2
27	Tu.	6. 4.17.11	12. 15.44,0	1. 42. 19	9. 5,6	19,9
28	W.	6. 5.16.13	12. 19.20,8	2. 5. 45	9. 25,3	19,7
29	Th.	6. 6.15.16	12. 22.57,8	2. 29. 10	9. 44,7	19,4
30	F.	6. 7.14.21	12. 26.35,1	2. 52. 33	10. 3,9	19,2

Days.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	15. 54,9	1. 4,3	2. 25,3	0. 003612	6. 14. 25
7	15. 56,4	1. 4,1	2. 25,7	0. 002933	6. 14. 5
13	15. 57,9	1. 4,0	2. 26,2	0. 002227	6. 13. 46
19	15. 59,4	1. 4,0	2. 26,7	0. 001519	6. 13. 27
25	16. 1,0	1. 4,1	2. 27,3	0. 000801	6. 13. 8

The Eclipſes of JUPITER's Satellites will not be viſible this Month, JUPITER being too near the SUN.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Passage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
			MERCURY. Gr. Elong. 7d.			
1	8. 14. 42	3. 23 S	6. 4. 39	1. 29 S	3. 13 S	1. 33
4	8. 22. 57	4. 14	6. 8. 13	1. 55	5. 2	1. 34
7	9. 1. 20	5. 0	6. 11. 27	2. 21	6. 42	1. 35
10	9. 9. 54	5. 40	6. 14. 20	2. 45	8. 12	1. 34
13	9. 18. 47	6. 14	6. 16. 45	3. 8	9. 29	1. 31
16	9. 28. 6	6. 40	6. 18. 38	3. 27	10. 30	1. 27
19	10. 7. 57	6. 56	6. 19. 50	3. 41	11. 11	1. 21
22	10. 18. 29	7. 0	6. 20. 10	3. 48	11. 25	1. 11
25	10. 29. 52	6. 48	6. 19. 30	3. 45	11. 6	0. 57
28	11. 12. 15	6. 17	6. 17. 42	3. 28	10. 9	0. 40
30	11. 21. 9	5. 43	6. 15. 55	3. 8	9. 9	0. 27
			VENUS.			
1	10. 9. 41	2. 47 S	6. 22. 29	3. 56 S	12. 24 S	2. 35
7	10. 19. 10	3. 3	6. 26. 34	4. 43	14. 39	2. 28
13	10. 28. 40	3. 15	6. 29. 57	5. 31	16. 37	2. 18
19	11. 8. 10	3. 22	7. 2. 26	6. 17	18. 13	2. 5
25	11. 17. 41	3. 23	7. 3. 50	6. 58	19. 21	1. 48
			MARS.			
1	2. 27. 45	1. 11 N	3. 24. 26	0. 52 N	22. 7 N	21. 3
7	3. 0. 40	1. 15	3. 28. 13	0. 57	21. 28	20. 57
13	3. 3. 34	1. 19	4. 1. 57	1. 1	20. 44	20. 51
19	3. 6. 27	1. 23	4. 5. 39	1. 5	19. 56	20. 45
25	3. 9. 17	1. 27	4. 9. 18	1. 10	19. 4	20. 39
			JUPITER.			
1	6. 9. 25	1. 19 N	6. 4. 47	1. 8 N	0. 52 S	1. 37
7	6. 9. 52	1. 19	6. 6. 1	1. 8	1. 22	1. 20
13	6. 10. 19	1. 19	6. 7. 17	1. 7	1. 52	1. 3
19	6. 10. 46	1. 19	6. 8. 34	1. 7	2. 22	0. 46
25	6. 11. 14	1. 19	6. 9. 51	1. 7	2. 53	0. 29
			SATURN.			
1	0. 14. 11	2. 29 S	0. 18. 4	2. 43 S	4. 35 N	14. 26
7	0. 14. 23	2. 29	0. 17. 44	2. 44	4. 26	14. 4
13	0. 14. 35	2. 29	0. 17. 22	2. 45	4. 17	13. 41
19	0. 14. 48	2. 29	0. 16. 57	2. 46	4. 7	13. 18
25	0. 15. 0	2. 29	0. 16. 30	2. 47	3. 56	12. 55

V. SEPTEMBER 1791.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D.M.S.	D. M. S.
1	Th.	6. 16.59.27	6. 24. 0.26	0.21. 3 N	0. 59. 7 N
2	F.	7. 1. 2.56	7. 8. 6.39	1.36.27	2. 12. 23
3	Sa.	7. 15.11.15	7. 22.16.32	2.46.24	3. 17. 54
4	*Su.*	7. 29.22.12	8. 6.28. 1	3.46.23	4. 11. 24
5	M.	8. 13.33.47	8. 20.39.14	4.32.33	4. 49. 31
6	Tu.	8. 27.44. 8	9. 4.48.10	5. 2. 2	5. 9. 57
7	W.	9. 11.51. 6	9. 18.52.31	5.13.11	5. 11. 41
8	Th.	9. 25.52.11	10. 2.49.40	5. 5.34	4. 54. 58
9	F.	10. 9.44.41	10. 16.36.50	4.40. 7	4. 21. 19
10	Sa.	10. 23.25.50	11. 0.11.21	3.58.55	3. 33. 20
11	*Su.*	11. 6.53. 8	11. 13.31. 0	3. 5. 1	2. 34. 26
12	M.	11. 20. 4.45	11. 26.34.21	2. 2. 6	1. 28. 28
13	Tu.	0. 2.59.42	0. 9.20.54	0.54. 2 N	0. 19. 16 N
14	W.	0. 15.38. 2	0. 21.51.17	0.15.22 S	0. 49. 32 S
15	Th.	0. 28. 0.54	1. 4. 7.11	1.22.46	1. 54. 46
16	F.	1. 10.10.29	1. 16.11.15	2.25.13	2. 53. 51
17	Sa.	1. 22. 9.53	1. 28. 6.57	3.20.25	3. 44. 41
18	*Su.*	2. 4. 2.54	2. 9.58.23	4. 6.29	4. 25. 36
19	M.	2. 15.53.55	2. 21.50. 7	4.41.54	4. 55. 14
20	Tu.	2. 27.47.34	3. 3.46.53	5. 5.24	5. 12. 22
21	W.	3. 9.48.37	3. 15.53.22	5.15.53	5. 15. 57
22	Th.	3. 22. 1.39	3. 28.13.57	5.12.25	5. 5. 14
23	F.	4. 4.30.43	4. 10.52.20	4.54.19	4. 39. 39
24	Sa.	4. 17.19. 5	4. 23.51.14	4.21.18	3. 59. 17
25	*Su.*	5. 0.28.52	5. 7.12. 0	3.33.47	3. 4. 57
26	M.	5. 14. 0.35	5. 20.54.22	2.33. 7	1. 58. 38
27	Tu.	5. 27.53. 3	6. 4.56.12	1.21.58	0. 43. 38 S
28	W.	6. 12. 3.17	6. 19.13.42	0. 4.16 S	0. 35. 30 N
29	Th.	6. 26.26.49	7. 3.41.50	1.14.56 N	1. 53. 21
30	F.	7. 10.58. 9	7. 18.14.56	2.30. 1	3. 4. 19

SEPTEMBER 1791.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid.	☽'s Right Aſcenſ. at Noon.	☽'s Right Aſcenſ. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	Th.	4	2. 27	195. 48	202.36	6. 21 S	8. 24 S
2	F.	5	3. 20	209. 29	216.28	10. 20	12. 8
3	Sa.	6	4. 15	223. 33	230.44	13. 45	15. 10
4	*Su.*	7	5. 11	238. 0	245.21	16. 21	17. 17
5	M.	8	6. 8	252. 45	260.11	17. 56	18. 19
6	Tu.	9	7. 6	267. 37	275. 2	18. 24	18. 13
7	W.	10	8. 4	282. 24	289.41	17. 44	16. 59
8	Th.	11	9. 0	296. 53	303.57	15. 59	14. 46
9	F.	12	9. 54	310. 55	317.44	13. 20	11. 43
10	Sa.	13	10. 45	324. 26	331. 1	9. 57	8. 5
11	*Su.*	14	11. 34	337. 28	343.49	6. 8	4. 7
12	M.	15	12. 22	350. 5	356.16	2. 4 S	0. 1 S
13	Tu.	16	13. 9	2. 23	8.28	2. 1 N	4. 0 N
14	W.	17	13. 55	14. 30	20.31	5. 55	7. 45
15	Th.	18	14. 41	26. 31	32.31	9. 29	11. 6
16	F.	19	15. 27	38. 32	44.34	12. 35	13. 55
17	Sa.	20	16. 13	50. 38	56.44	15. 6	16. 7
18	*Su.*	21	17. 0	62. 51	69. 1	16. 57	17. 36
19	M.	22	17. 48	75. 12	81.26	18. 3	18. 18
20	Tu.	23	18. 36	87. 41	93.58	18. 21	18. 12
21	W.	24	19. 25	100. 16	106.36	17. 51	17. 17
22	Th	25	20. 14	112. 56	119.17	16. 31	15. 33
23	F.	26	21. 3	125. 39	132. 1	14. 23	13. 2
24	Sa.	27	21. 52	138. 25	144.50	11. 30	9. 49
25	*Su.*	28	22. 42	151. 17	157.46	7. 59	6. 1
26	M.	29	23. 33	164. 17	170.52	3. 56 N	1. 47 N
27	Tu.	1	☌	177. 31	184.14	0. 25 S	2. 38
28	W.	2	0. 26	191. 3	197.58	4. 50	6. 59
29	Th.	3	1. 20	204. 59	212. 6	9. 3	10. 59
30	F.	4	2. 16	219. 20	226.40	12. 45	14. 19

VII. SEPTEMBER 1791.

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	Th.	16. 6	16. 8	59. 4	59. 13	4839	4828
2	F.	16. 10	16. 11	59. 19	59. 24	4821	4815
3	Sa.	16. 12	16. 12	59. 27	59. 28	4811	4810
4	*Su.*	16. 12	16. 12	59. 28	59. 27	4810	4811
5	M.	16. 11	16. 10	59. 25	59. 21	4813	4819
6	Tu.	16. 9	16. 8	59. 17	59. 11	4823	4831
7	W.	16. 6	16. 3	59. 4	58. 56	4839	4849
8	Th.	16. 1	15. 58	58. 47	58. 36	4860	4874
9	F.	15. 55	15. 51	58. 25	58. 12	4887	4903
10	Sa.	15. 48	15. 44	57. 59	57. 44	4919	4938
11	*Su.*	15. 40	15. 35	57. 29	57. 12	4957	4979
12	M.	15. 31	15. 26	56. 55	56. 38	5000	5022
13	Tu.	15. 21	15. 17	56. 21	56. 4	5044	5065
14	W.	15. 12	15. 8	55. 47	55. 31	5087	5108
15	Th.	15. 4	15. 0	55. 16	55. 2	5128	5146
16	F.	14. 57	14. 54	54. 50	54. 40	5162	5175
17	Sa.	14. 52	14. 50	54. 32	54. 26	5186	5194
18	*Su.*	14. 49	14. 49	54. 22	54. 21	5199	5201
19	M.	14. 49	14. 50	54. 22	54. 26	5199	5194
20	Tu.	14. 52	14. 54	54. 32	54. 41	5186	5174
21	W.	14. 57	15. 1	54. 52	55. 6	5159	5141
22	Th.	15. 5	15. 10	55. 22	55. 41	5120	5095
23	F.	15. 16	15. 22	56. 1	56. 23	5069	5041
24	Sa.	15. 28	15. 35	56. 46	57. 10	5012	4981
25	*Su.*	15. 41	15. 48	57. 34	57. 58	4951	4921
26	M.	15. 54	16. 0	58. 21	58. 43	4892	4865
27	Tu.	16. 5	16. 10	59. 3	59. 21	4841	4819
28	W.	16. 14	16. 18	59. 36	59. 49	4800	4784
29	Th.	16. 21	16. 22	59. 59	60. 5	4772	4765
30	F.	16. 23	16. 24	60. 9	60. 10	4760	4759

Diſtances of ☽'s Center from Sun, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Antares.	50. 3. 18	48. 19. 56	46. 36. 35	44.53.15	43. 9. 58	41. 26. 47	39. 43. 44	38. 0.52
2		36. 18. 11	34. 35. 40	32. 53. 28	31.11.41	29. 30. 20	27. 49. 32	26. 9. 22	24.29.59
3		22. 51. 15							
3	α Aquilæ.	74. 24. 9	72. 47. 59	71. 12. 0	69.36.12	68. 0. 37	66. 25. 18	64. 50. 18	63.15.38
4		61. 41. 20	60. 7. 25	58. 33. 58	57. 1. 1	55. 28. 35	53. 56. 45	52. 25. 35	50.55. 6
5		49. 25. 20							
5	α Pegaſi.	95. 5. 31	93. 24. 13	91. 42. 56	90. 1.41	88. 20. 29	86. 39. 20	84. 58. 16	83.17.17
6		81. 36. 24	79. 55. 37	78. 14. 57	76.34.25	74. 54. 1	73. 13. 46	71. 33. 42	69.53.50
7		68. 14. 10	66. 34. 43	64. 55. 30	63.16.33	61. 37. 53	59. 59. 30	58. 21. 27	56.43.45
8		55. 6. 25	53. 29. 29	51. 53. 0	50.17. 0	48. 41. 31	47. 6. 34	45. 32. 14	43.58.36
9		42. 25. 42	40. 53. 32	39. 22. 16	37.52. 1	36. 22. 53	34. 54. 59	33. 28. 25	32. 3.16
10		30. 39. 39							
10	α Arietis.	70. 56. 11	69. 16. 59	67. 38. 2	65.59.20	64. 20. 54	62. 42. 44	61. 4. 52	59 27.18
11		57. 50. 3	56. 13. 7	54. 36. 32	53. 0.18	51. 24. 26	49. 48. 57	48. 13. 53	46.39.15
12		45. 5. 3	43. 31. 18	41. 58. 3	40.25.21	38. 53. 14	37. 21. 43	35. 50. 52	34.20.43
13		32. 51. 16							
13	Aldebaran.	64. 6. 52	62. 30. 49	60. 55. 1	59.19.29	57. 44. 13	56. 9. 12	54. 34. 26	52.59.56
14		51. 25. 40	49. 51. 38	48. 17. 51	46.44.19	45. 11. 0	43. 37. 55	42. 5. 5	40.32.29

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
15	Aldebaran.	39. 0. 7	37. 27. 59	35. 56. 3	34.24.20	32. 52. 51	31. 21. 33	29. 50. 28	28.19.34
16		26. 48. 52	25. 18. 21	23. 48. 1	22.17.51	20. 47. 51			
16	Pollux.					64. 45. 24	63. 17. 49	61. 50. 26	60.23.14
17		58. 56. 15	57. 29. 28	56. 2. 53	54.36.29	53. 10. 18	51. 44. 19	50. 18. 31	48.52.56
18		47. 27. 34	46. 2. 23	44. 37. 25	43.12.42	41. 48. 14	40. 24. 0	39. 0. 3	37.36.26
19		36. 13. 8	34. 50. 8	33. 27. 34	32. 5.28	30. 43. 54	29. 22. 55	28. 2. 34	26.42.54
20		25. 24. 0							
17	The Sun.	122. 15. 26	120. 53. 21	119. 31. 22	118. 9.29	116. 47. 42	115. 26. 0	114. 4. 22	112.42.48
18		111. 21. 18	109. 59. 51	108. 38. 26	107.17. 2	105. 55. 40	104. 34. 20	103. 12. 59	101.51.38
19		100. 30. 17	99. 8. 54	97. 47. 28	96.26. 0	95. 4. 29	93. 42. 53	92. 21. 13	90.59.27
20		89. 37. 36	88. 15. 39	86. 53. 34	85.31.22	84. 9. 2	82. 46. 34	81. 23. 56	80. 1. 8
21		78. 38. 10	77. 15. 0	75. 51. 38	74.28. 4	73. 4. 18	71. 40. 19	70. 16. 5	68.51.38
22		67. 26. 55	66. 1. 57	64. 36. 43	63.11.12	61. 45. 25	60. 19. 20	58. 52. 57	57.26.16
23		55. 59. 17	54. 31. 59	53. 4. 21	51.36.23	50. 8. 6	48. 39. 28	47. 10. 30	45.41.11
24		44. 11. 31	42. 41. 29	41. 11. 6	39.40.20				
29	Antares.	40. 47. 12	39. 1. 18	37. 15. 38	35.30.11	33. 45. 0	32. 0. 10	30. 15. 47	28.31.52
30		26. 48. 25							
30	α Aquilæ.	78. 12. 9	76. 32. 51	74. 53. 44	73.14.47	71. 36. 1	69. 57. 30	68. 19. 18	66.41.26
O.1		65. 3. 57							

Diſtances of ☽'s Center from Sun, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D.M.S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	The Sun.	38. 4. 33	39. 42. 27	41. 20. 28	42.58.37	44. 36. 53	46. 15. 14	47. 53. 41	49.32.14
2		51. 10. 52	52. 49. 33	54. 28. 18	56. 7. 7	57. 46. 0	59. 24. 55	61. 3. 51	62.42.49
3		64. 21. 49	66. 0. 51	67. 39. 54	69.18.57	70. 58. 1	72. 37. 5	74. 16. 8	75.55.11
4		77. 34. 14	79. 13. 16	80. 52. 17	82.31.17	84. 10. 15	85. 49. 12	87. 28. 6	89. 6.58
5		90. 45. 48	92. 24. 35	94. 3. 20	95.42. 2	97. 20. 41	98. 59. 16	100. 37. 48	102.16.16
6		103. 54. 41	105. 33. 2	107. 11. 19	108.49.31	110. 27. 39	112. 5. 43	113. 43. 42	115.21.36
7		116. 59. 24	118. 37. 6	120. 14. 41					
5	Spica ♍	52. 59. 48	54. 45. 47	56. 31. 43	58.17.37	60. 3. 28	61. 49. 16	63. 35. 1	65.20.43
6		67. 6. 22	68. 51. 57	70. 37. 28	72.22.54	74. 8. 16	75. 53. 34	77. 38. 47	79.23.55
7		81. 8. 58							
7	Antares.	36. 17. 23	37. 59. 5	39. 40. 54	41.22.51	43. 4. 54	44. 47. 2	46. 29. 12	48.11.24
8		49. 53. 36	51. 35. 46	53. 17. 54	55. 0. 0	56. 42. 3	58. 24. 2	60. 5. 56	61.47.44
9		63. 29. 26	65. 11. 2	66. 52. 30	68.33.51	70. 15. 4	71. 56. 8	73. 37. 3	75.17.49
10		76. 58. 25	78. 38. 51	80. 19. 5	81.59. 8	83. 39. 0	85. 18. 40	86. 58. 7	88.37.22
11		90. 16. 24	91. 55. 12	93. 33. 47	95.12. 8	96. 50. 15	98. 28. 7	100. 5. 45	101.43. 8
12		103. 20. 15							
12	α Aquilæ.	55. 44. 28	57. 9. 51	58. 35. 23	60. 1. 5	61. 26. 56	62. 52. 54	64. 18. 56	65.45. 2
13		67. 11. 9	68. 37. 15	70. 3. 20	71.29.23	72. 55. 22	74. 21. 17	75. 47. 6	77.12.48
14		78. 38. 24							

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D.M.S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
14	Fomal-haut.	48. 20. 33	49. 39. 7	50. 58. 3	52. 17. 21	53. 37. 0	54. 56. 59	56. 17. 11	57. 37. 37
15		58. 58. 15	60. 19. 2	61. 39. 57	63. 0. 59	64. 22. 7	65. 43. 19	67. 4. 32	68. 25. 49
16		69. 47. 9							
16	α Pegasi.	53. 20. 57	54. 45. 14	56. 9. 33	57. 33. 55	58. 58. 19	60. 22. 45	61. 47. 13	63. 11. 42
17		64. 36. 12	66. 0. 43	67. 25. 14	68. 49. 45	70. 14. 16	71. 38. 47	73. 3. 18	74. 27. 50
18		75. 52. 21	77. 16. 53	78. 41. 26	80. 5. 59	81. 30. 32			
18	α Arietis.					37. 54. 58	39. 18. 44	40. 42. 45	42. 7. 1
19		43. 31. 32	44. 56. 18	46. 21. 18	47. 46. 32	49. 11. 59	50. 37. 38	52. 3. 30	53. 29. 34
20		54. 55. 51	56. 22. 20	57. 49. 2	59. 15. 56	60. 43. 2			
20	Aldeba-ran.					26. 46. 52	28. 16. 34	29. 46. 27	31. 16. 31
21		32. 46. 46	34. 17. 12	35. 47. 50	37. 18. 41	38. 49. 45	40. 21. 2	41. 52. 34	43. 24. 20
22		44. 56. 20	46. 28. 36	48. 1. 9	49. 33. 57	51. 7. 3	52. 40. 26	54. 14. 7	55. 48. 6
23		57. 22. 24	58. 57. 1	60. 31. 58	62. 7. 14	63. 42. 51	65. 18. 48	66. 55. 6	68. 31. 45
24		70. 8. 44							
24	Pollux.	29. 5. 30	30. 34. 13	32. 3. 55	33. 34. 35	35. 6. 14	36. 38. 45	38. 12. 3	39. 46. 6
25		41. 20. 56	42. 56. 24	44. 32. 29	46. 9. 11	47. 46. 30	49. 24. 23	51. 2. 47	52. 41. 42
26		54. 21. 7							
30	The Sun.				38. 54. 48	40. 36. 49	42. 18. 47	44. 0. 41	45. 42. 33
O. 1		47. 24. 21							

The Satellites of JUPITER will not be viſible this Month, JUPITER being too near the SUN.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Sa.	Remigius.
2	*Su.*	*15th Sunday after Trinity.*
3	M.	
4	Tu.	
5	W.	
6	Th.	Faith.
7	F.	
8	Sa.	
9	*Su.*	16*th Su. aft. Tr.* St. Den
10	M.	Oxf. and Cam. Ter. beg.
11	Tu.	
12	W.	
13	Th.	Tranſ. of K. Edw. Conf.
14	F.	
15	Sa.	
16	*Su.*	*17th Sunday after Trinity.*
17	M.	Etheldred.
18	Tu.	*St. Luke.*
19	W.	
20	Th.	
21	F.	
22	Sa.	
23	*Su.*	*18th Sunday after Trinity.*
24	M.	
25	Tu.	*K. Geo. III. Acceſ.* Criſp.
26	W.	*K. Geo. III. procl.* 1760.
27	Th.	
28	F.	*St. Simon and St. Jude.*
29	Sa.	
30	*Su.*	*19th Sunday after Trinity.*
31	M.	

Phases of the Moon.

	D. H. M.
First Quarter	4. 4. 44
Full Moon	11. 13. 42
Laſt Quarter	19. 17. 49
New Moon	26. 22. 22

Other Phenomena.

D.H.M.	
1. 2 22	☾ θ ♎
5. 14. 53	☾ β ♑
7. 18. 59	☾ θ ♒
11.	☾ eclipſ. viſible
10. 24	☾ ζ ♓
13.	☿ Stationary.
15. 7. 35	☾ 1 ad δ ♉
8. 6	☾ 2 ad δ ♉
13. 30	☾ α ♉ [39′.
20.	♃ θ ♍ diff. Lat.
19. 50	☾ 1 ad α ♋
20. 52	☾ 2 ad α ♋
21. 1. 42	☾ κ ♋
16. 58	☾ ο ♌
22. 2. 23	☾ π ♌
23. 11	☉ enters ♏
24. 0. 32	☾ υ ♌ [20′.
25.	☿ θ ♍ diff. Lat.
	☿ ♃ diff. Lat. 57′.
17. 44	☾ ♃

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Afc. in Time.	Sun's Declin. South.	Equat. of Time. Sub.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	Sa.	6. 8.13.28	12. 30.12,6	3.15.55	10. 22,9	18,6
2	*Su.*	6. 9.12.37	12. 33.50,5	3.39.14	10. 41,5	18,4
3	M.	6. 10.11.47	12. 37.28,6	4. 2.31	10. 59,9	18,1
4	Tu.	6. 11.11. 0	12. 41. 7,0	4.25.44	11. 18,0	17,8
5	W.	6. 12.10.14	12. 44.45,8	4.48.55	11. 35,8	17,4
6	Th.	6. 13. 9.29	12. 48.24,8	5.12. 1	11. 53,2	17,0
7	F.	6. 14. 8.46	12. 52. 4,3	5.35. 3	12. 10,2	16,6
8	Sa.	6. 15. 8. 6	12. 55.44,2	5.58. 2	12. 26,8	16,2
9	*Su.*	6. 16. 7.27	12. 59.24,5	6.20.55	12. 43,0	15,7
10	M.	6. 17. 6.50	13. 3. 5,3	6.43.43	12. 58,7	15,3
11	Tu.	6. 18. 6.15	13. 6.46,5	7. 6.26	13. 14,0	14,9
12	W.	6. 19. 5.41	13. 10.28,2	7,29. 3	13. 28,9	14,3
13	Th.	6. 20. 5.10	13. 14.10,4	7.51.34	13. 43,2	13,7
14	F.	6. 21. 4.41	13. 17.53,2	8.13.58	13. 50,9	13,2
15	Sa.	6. 22. 4.14	13. 21.36,4	8.36.16	14. 10,1	12,7
16	*Su.*	6. 23. 3.49	13. 25.20,3	8.58.26	14. 22,8	12,1
17	M.	6. 24. 3.27	13. 29. 4,8	9.20.28	14. 34,9	11,4
18	Tu.	6. 25. 3. 7	13. 32.49,9	9.42.23	14. 46,3	10,8
19	W.	6. 26. 2.49	13. 36.35,6	10. 4. 9	14. 57,1	10,2
20	Th.	6. 27. 2.34	13. 40.22,0	10.25.47	15. 7,3	9,4
21	F.	6. 28. 2.21	13. 44. 9,1	10.47.15	15. 16,7	8,7
22	Sa.	6. 29. 2.11	13. 47.56,9	11. 8.34	15. 25,4	8,1
23	*Su.*	7. 0. 2. 3	13. 51.45,3	11.29.43	15. 33,5	7,4
24	M.	7. 1. 1.57	13. 55.34,5	11.50.42	15. 40,9	6,6
25	Tu.	7. 2. 1.53	13. 59.24,4	12.11.29	15. 47,5	5,9
26	W.	7. 3. 1.51	14. 3.15,0	12.32. 6	15. 53,4	5,2
27	Th.	7. 4. 1.52	14. 7. 6,4	12.52.31	15. 58,6	4,5
28	F.	7. 5. 1.54	14. 10.58,5	13.12.44	16. 3,1	3,6
29	Sa.	7. 6. 1.58	14. 14.51,4	13.32.44	16. 6,7	2,9
30	*Su.*	7. 7. 2. 4	14. 18.45,0	13.52.32	16. 9,6	2,2
31	M.	7. 8. 2.11	14. 22.39,4	14.12. 6	16. 11,8	

Days.	Semidiameter of the Sun.		Time of D° paſſing the Meridian.		Hourly Motion of the Sun.		Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	M.	S.	M.	S.	M.	S.		S. D. M.
1	16.	2,7	1.	4,3	2.	27,8	0. 000046	6. 12. 49
7	16.	4,4	1.	4,6	2.	28,4	9. 999275	6. 12. 30
13	16.	6,0	1.	5,0	2.	28,9	9. 998518	6. 12. 11
19	16.	7,6	1.	5,5	2.	29,2	9. 997797	6. 11. 52
25	16.	9,3	1.	6,1	2.	29,7	9. 997103	6. 11. 33

The Eclipſes of the Satellites of JUPITER will not be viſible this Month, JUPITER being too near the Sun.

Days.	Heliocentric Longitude. S. D. M.	Heliocentric Latitude. D. M.	Geocentric Longitude. S. D. M.	Geocentric Latitude. D. M.	Declination. D. M.	Passage over Merid. H. M.
Inf ☌ 4^d. 3½^h. MERCURY. Gr. Elong. 18^d.						
1	11. 25. 48	5. 23 S	6. 14. 53	2. 54 S	8. 33 S	0. 20
4	0. 10. 39	4. 3	6. 11. 28	2. 6	6. 28	23. 50
7	0. 26. 52	2. 17	6. 8. 9	1. 5	4. 14	23. 30
10	1. 14. 21	0. 11 S	6. 5. 46	0. 5 S	2. 22	23. 13
13	2. 2. 48	2. 3 N	6. 4. 54	0. 47 N	1. 13	23. 2
16	2. 21. 43	4. 7	6. 5. 38	1. 27	0. 55	22. 57
19	3. 10. 27	5. 43	6. 7. 50	1. 52	1. 24	22. 55
22	3. 28. 23	6. 41	6. 11. 5	2. 4	2. 29	22. 57
25	4. 15. 4	7. 0	6. 15. 5	2. 6	4. 0	23. 1
28	5. 0. 19	6. 47	6. 19. 32	2. 1	5. 47	23. 6
31	5. 14. 11	6. 10	6. 24. 14	1. 50	7. 42	23. 12
VENUS. Inf. ☌ 19^d. 6¾^h.						
1	11. 27. 13	3. 18 S	7. 3. 56	7. 28 S	19. 52 S	1. 26
7	0. 6. 45	3. 8	7. 2. 37	7. 41	19. 36	0. 58
13	0. 16. 18	2. 53	6. 29. 59	7. 29	18. 28	0. 26
19	6. 25. 53	2. 33	6. 26. 30	6. 50	16. 35	23. 46
25	1. 5. 28	2. 9	6. 22. 57	5. 38	14. 9	23. 11
MARS.						
1	3. 12. 7	1. 30 N	4. 12. 55	1. 15 N	18. 9 N	20. 32
7	3. 14. 55	1. 33	4. 16. 29	1. 19	17. 10	20. 24
13	3. 17. 43	1. 36	4. 19. 59	1. 23	16. 9	20. 16
19	3. 20. 29	1. 38	4. 23. 27	1. 28	15. 6	20. 7
25	3. 23. 14	1. 41	4. 26. 52	1. 33	14. 1	19. 58
JUPITER. ☌ 4^d. 19¼^h.						
1	6. 11. 41	1. 19 N	6. 11. 8	1. 7 N	3. 23 S	0. 12
7	6. 12. 8	1. 19	6. 12. 27	1. 7	3. 54	23. 53
13	6. 12. 35	1. 19	6. 13. 44	1. 7	4. 24	23. 35
19	6. 13. 2	1. 19	6. 15. 2	1. 7	4. 54	23. 18
25	6. 13. 29	1. 19	6. 16. 18	1. 7	5. 23	22. 59
SATURN. ☍ 8^d. 8^h.						
1	0. 15. 13	2. 29 S	0. 16. 3	2. 47 S	3. 45 N	12. 31
7	0. 15. 25	2. 29	0. 15. 34	2. 47	3. 34	12. 8
13	0. 15. 38	2. 29	0. 15. 6	2. 47	3. 23	11. 44
19	0. 15. 50	2. 29	0. 14. 38	2. 47	3. 12	11. 20
25	0. 16. 3	2. 30	0. 14. 11	2. 46	3. 3	10. 55

OCTOBER 1791.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	Sa.	7. 25.31.36	8. 2.47.26	3. 35. 33 N	4. 3.16 N
2	*Su.*	8. 10. 1.49	8. 17.14.19	4. 27. 0	4.46.23
3	M.	8. 24.24.27	9. 1.31.52	5. 1. 11	5.11.15
4	Tu.	9. 8.36.17	9. 15.37.29	5. 16. 31	5.17. 1
5	W.	9. 22.35.16	9. 29.29.34	5. 12. 50	5. 4. 9
6	Th.	10. 6.20.16	10. 13. 7.23	4. 51. 13	4.34.16
7	F.	10. 19.50.50	10. 26.30.43	4. 13. 44	3.49.54
8	Sa.	11. 3. 7. 3	11. 9.39.52	3. 23. 12	2.54. 4
9	*Su.*	11. 16. 9.16	11. 22.35.18	2. 22. 54	1.50.11
10	M.	11. 28.58. 2	0. 5.17.35	1. 16. 22	0.41.53 N
11	Tu.	0. 11.34. 2	0. 17.47.30	0. 7. 10 N	0.27.20 S
12	W.	0. 23.58. 7	1. 0. 6. 3	1. 1. 16 S	1.34.13
13	Th.	1. 6.11.24	1. 12.14.27	2. 5. 51	2.35.50
14	F.	1. 18.15.24	1. 24.14.30	3. 3. 55	3.29.47
15	Sa.	2. 0.12. 6	2. 6. 8.31	3. 53. 17	4.14. 9
16	*Su.*	2. 12. 4. 8	2. 17.59.21	4. 32. 15	4.47.24
17	M.	2. 23.54.40	2. 29.50.30	4. 59. 30	5. 8.24
18	Tu.	3. 5.47.26	3. 11.45.57	5. 14. 3	5.16.19
19	W.	3. 17.46.35	3. 23.50. 0	5. 15. 10	5.10.30
20	Th.	3. 29.56.40	4. 6. 7.12	5. 2. 19	4.50.34
21	F.	4. 12.22. 9	4. 18.41.58	4. 35. 14	4.16.23
22	Sa.	4. 25. 7.15	5. 1.38.21	3. 54. 4	3.28.24
23	*Su.*	5. 8.15.38	5. 14.59.21	2. 59. 34	2.27.48
24	M.	5. 21.49.40	5. 28.46.34	1. 53. 25	1,16.49 S
25	Tu.	6. 5.49.54	6. 12.59.18	0. 38. 31 S	0. 0.56 N
26	W.	6. 20.14.18	6. 27.34.17	0. 40. 51 N	1.20.31
27	Th.	7. 4.58.25	7. 12.25.44	1. 59. 11	2.36. 3
28	F.	7. 19.55.12	7. 27.25.40	3. 10. 22	3.41.27
29	Sa.	8. 4.56. 2	8. 12.25.10	4. 8. 40	4.31.32
30	*Su.*	8. 19.52. 0	8. 27.15.39	4. 49. 40	5. 2.51
31	M.	9. 4.35.20	9. 11.50.24	5. 10. 55	5.13.55

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid. H. M.	☽'s Right Aſcenſion at Noon. D. M.	☽'s Right Aſcenſ. at Midn. D. M.	☽'s Declination at Noon. D. M.	☽'s Declination at Midn. D. M.
1	Sa.	5	3. 15	234. 5	241. 33	15. 40 S	16. 45 S
2	*Su.*	6	4. 13	249. 4	256. 37	17. 34	18. 5
3	M.	7	5. 11	264. 8	271. 36	18. 19	18. 16
4	Tu.	8	6. 9	279. 1	286. 19	17. 55	17. 18
5	W.	9	7. 5	293. 30	300. 34	16. 26	15. 19
6	Th.	10	7. 58	307. 29	314. 16	14. 0	12. 31
7	F.	11	8. 49	320. 55	327. 26	10. 52	9. 6
8	Sa.	12	9. 38	333. 50	340. 8	7. 13	5. 16
9	*Su.*	13	10. 26	346. 20	352. 28	3. 16 S	1. 15 S
10	M.	14	11. 12	358. 33	4. 35	0. 45 N	2. 45 N
11	Tu.	15	11. 58	10. 35	16. 35	4. 41	6. 34
12	W.	16	12. 43	22. 34	28. 34	8. 22	10. 3
13	Th.	17	13. 29	34. 34	40. 36	11. 37	13. 3
14	F.	18	14. 16	46. 40	52. 46	14. 20	15. 28
15	Sa.	19	15. 2	58. 53	65. 2	16. 25	17. 11
16	*Su.*	20	15. 50	71. 12	77. 24	17. 46	18. 9
17	M.	21	16. 38	83. 36	89. 50	18. 20	18. 20
18	Tu.	22	17. 25	96. 4	102. 18	18. 7	17. 42
19	W.	23	18. 13	108. 32	114. 47	17. 5	16. 16
20	Th.	24	19. 0	121. 1	127. 16	15. 15	14. 4
21	F.	25	19. 48	133. 31	139. 47	12. 42	11. 10
22	Sa.	26	20. 38	146. 4	152. 24	9. 29	7. 39
23	*Su.*	27	21. 27	158. 47	165. 14	5. 42	3. 39 N
24	M.	28	22. 18	171. 45	178. 22	1. 30 N	0. 41 S
25	Tu.	29	23. 11	185. 6	191. 57	2. 54 S	5. 7
26	W.	1	☌	198. 57	206. 5	7. 17	9. 22
27	Th.	2	0. 7	213. 22	220. 48	11. 19	13. 6
28	F.	3	1. 5	228. 21	236. 1	14. 41	16. 1
29	Sa.	4	2. 5	243. 46	251. 34	17. 4	17. 49
30	*Su.*	5	3. 6	259. 22	267. 8	18. 16	18. 23
31	M.	6	4. 6	274. 49	282. 23	18. 12	17. 43

OCTOBER 1791.

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	Sa.	16. 23	16. 22	60. 8	60. 3	4761	4768
2	*Su.*	16. 20	16. 17	59. 56	59. 47	4776	4787
3	M.	16. 14	16. 11	59. 36	59. 25	4800	4813
4	Tu.	16. 8	16. 4	59. 12	58. 57	4830	4848
5	W.	16. 0	15. 56	58. 42	58. 27	4866	4885
6	Th.	15. 52	15. 47	58. 12	57. 56	4903	4923
7	F.	15. 43	15. 39	57. 41	57. 26	4942	4961
8	Sa.	15. 35	15. 31	57. 10	56. 55	4981	5000
9	*Su.*	15. 27	15. 22	56. 40	56. 25	5019	5038
10	M.	15. 18	15. 14	56. 10	55. 56	5058	5076
11	Tu.	15. 11	15. 7	55. 42	55. 29	5094	5111
12	W.	15. 4	15. 0	55. 16	55. 4	5128	5144
13	Th.	14. 57	14. 55	54. 53	54. 43	5158	5171
14	F.	14. 52	14. 50	54. 34	54. 27	5183	5193
15	Sa.	14. 49	14. 48	54. 21	54. 17	5201	5206
16	*Su.*	14. 47	14. 47	54. 14	54. 14	5210	5210
17	M.	14. 47	14. 49	54. 16	54. 21	5207	5201
18	Tu.	14. 51	14. 53	54. 28	54. 37	5191	5179
19	W.	14. 56	15. 0	54. 48	55. 2	5165	5146
20	Th.	15. 4	15. 10	55. 19	55. 38	5124	5099
21	F.	15. 16	15. 22	56. 0	56. 24	5071	5040
22	Sa.	15. 29	15. 36	56. 49	57. 15	5008	4975
23	*Su.*	15. 44	15. 51	57. 43	58. 10	4940	4906
24	M.	15. 58	16. 6	58. 37	59. 4	4872	4839
25	Tu.	16. 13	16. 19	59. 30	59. 54	4808	4778
26	W.	16. 25	16. 30	60. 15	60. 32	4753	4733
27	Th.	16. 34	16. 36	60. 46	60. 55	4716	4705
28	F.	16. 37	16. 38	61. 0	61. 1	4699	4698
29	Sa.	16. 37	16. 35	60. 58	60. 51	4702	4710
30	*Su.*	16. 32	16. 28	60. 40	60. 26	4723	4740
31	M.	16. 23	16. 18	60. 9	59. 50	4760	4783

Diſtances of ☽'s Center from Sun, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	α Aquilæ.	65. 3.57	63.26.53	61.50.13	60.14. 1	58.38.20	57. 3.12	55.28.47	53.55. 5
2		52.22. 8	50.50. 2	49.18.52	47.48.39	46.19.30			
2	α Pegaſi.					91.34. 3	89.51.30	88. 9. 5	86.26.50
3		84.44.47	83. 2.56	81.21.19	79.39.56	77.58.46	76.17.52	74.37.14	72.56.53
4		71.16.49	69.37. 2	67.57.35	66.18.29	64.39.42	63. 1.17	61.23.15	59.45.38
5		58. 8.25	56.31.36	54.55.16	53.19.26	51.44. 5	50. 9.15	48.35. 3	47. 1.29
6		45.28.33	43.56.14	42.24.46	40.54.10	39.24.25	37.55.42	36.28. 2	35. 1.32
7		33.36.13							
7	α Arietis.	74.25.40	72.47.48	71.10.11	69.32.48	67.55.40	66.18.47	64.42. 9	63. 5.47
8		61.29.41	59.53.51	58.18.18	56.43. 4	55. 8. 6	53.33.26	51.59. 7	50.25. 8
9		48.51.29	47.18.11	45.45.18	44.12.50	42.40.46	41. 9.11	39.38. 4	38. 7.27
10		36.37.22							
10	Aldebaran.	68. 9.39	66.34. 8	64.58.48	63.23.39	61.48.42	60.13.56	58.39.21	57. 4.58
11		55.30.46	53.56.45	52.22.56	50.49.18	49.15.51	47.42.35	46. 9.30	44.36.35
12		43. 3.52	41.31.19	39.58.58	38.26.46	36.54.46	35.22.57	33.51.18	32.19.49
13		30.48.30	29.17.21	27.46.21	26.15.32	24.44.53	23.14.23	21.44. 4	20.13.54
14		18.43.54							
14	Pollux.	62.44.40	61.17. 6	59.49.44	58.22.35	56.55.36	55.28.50	54. 2.17	52.35.56
15		51. 9.48	49.43.53	48.18.12	46.52.45	45.27.33	44. 2.35	42.37.54	41.13.31

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S	D. M. S.	D. M. S.
16	Pollux.	39. 49. 26	38. 25. 38	37. 2. 13	35.39.11	34. 16. 34	32. 54. 26	31. 32. 49	30.11.43
17		28. 51. 12							
17	Regulus.	63. 10. 53	61. 42. 37	60. 14. 19	58.45.59	57. 17. 37	55. 49. 12	54. 20. 43	52.52.11
18		51. 23. 35	49. 54. 54	48. 26. 8	46.57.15	45. 28. 18	43. 59. 15	42. 30. 5	41. 0.46
19		39. 31. 21	38. 1. 47	36. 32. 4	35. 2.13	33. 32. 14	32. 2. 6	30. 31. 50	29. 1.25
20		27. 30. 51							
17	The Sun.	120. 1. 13	118. 40. 5	117. 18. 55	115.57.42	114. 36. 26	113. 15. 6	111. 53. 42	110.32.13
18		109. 10. 40	107. 49. 2	106. 27. 17	105. 5.25	103. 43. 27	102. 21. 21	100. 59. 6	99.36.42
19		98. 14. 8	96. 51. 23	95. 28. 27	94. 5.20	92. 42. 1	91. 18. 31	89. 54. 46	88.30.48
20		87. 6. 36	85. 42. 8	84. 17. 23	82.52.23	81. 27. 7	80. 1. 33	78. 35. 40	77. 9.29
21		75. 43. 0	74. 16. 13	72. 49. 5	71.21.37	69. 53. 48	68. 25. 37	66. 57. 4	65.28. 8
22		63. 58. 50	62. 29. 9	60. 59. 4	59.28.36	57. 57. 44	56. 26. 27	54. 54. 45	53.22.38
23		51. 50. 7	50. 17. 10	48. 43. 47	47. 9.59	45. 35. 46	44. 1. 7	42. 26. 2	40.50.31
24		39. 14. 34							
28	α Aquilæ.	70. 6. 12	68. 25. 2	66. 44. 6	65. 3.27	63. 23. 11	61. 43. 19	60. 4. 0	58.25.12
29		56. 47. 0	55. 9. 29	53. 32. 45	51.56.49	50. 21. 45			
29	α Pegaſi.					96. 10. 9	94. 23. 34	92. 37. 7	90.50.52
30		89. 4. 49	87. 18. 58	85. 33. 23	83.48. 3	82. 2. 58	80. 18. 11	78. 33. 44	76.49.37
31		75. 5. 50	73. 22. 26	71. 39. 26	69.56.49	68. 14. 37	66. 32. 54	64. 51. 37	63.10.48
N. 1		61. 30. 28							

Diſtances of ☽'s Center from Sun, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	The Sun.	47. 24. 21	49. 6. 5	50. 47. 43	52.29.14	54. 10. 38	55. 51. 55	57. 33. 4	59.14. 6
2		60. 54. 59	62. 35. 44	64. 16. 19	65.56.45	67. 37. 2	69. 17. 8	70. 57. 4	72.36.49
3		74. 16. 23	75. 55. 46	77. 34. 57	79.13.56	80. 52. 45	82. 31. 21	84. 9. 44	85.47.56
4		87. 25. 56	89. 3. 43	90. 41. 18	92.18.41	93. 55. 51	95. 32. 48	97. 9. 33	98.46. 5
5		100. 22. 25	101. 58. 32	103. 34. 27	105.10. 9	106. 45. 39	108. 20. 56	109. 56. 0	111.30.52
6		113. 5. 31	114. 39. 58	116. 14. 13	117.48.15	119. 22. 6			
4	Antares.	33. 11. 39	34. 52. 52	36. 34. 7	38.15.27	39. 56. 51	41. 38. 17	43. 19. 39	45. 1. 1
5		46. 42. 21	48. 23. 36	50. 4. 44	51.45.46	53. 26. 43	55. 7. 32	56. 48. 12	58.28.44
6		60. 9. 9	61. 49. 24	63. 29. 30	65. 9.27	66. 49. 14	68. 28. 50	70. 8. 16	71.47.32
7		73. 26. 38	75. 5. 33	76. 44. 18	78.22.52	80. 1. 16	81. 39. 28	83. 17. 29	84.55.19
8		86. 32. 58	88. 10. 25	89. 47. 40	91.24.44	93. 1. 37	94. 38. 18	96. 14. 47	97.51. 5
9		99. 27. 12							
9	α Aquilæ.	52. 20. 26	53. 43. 48	55. 7. 26	56.31.22	57. 55. 37	59. 20. 6	60. 44. 43	62. 9.31
10		63. 34. 31	64. 59. 36	66. 24. 44	67.49.55	69. 15. 13	70. 40. 31	72. 5. 47	73.31. 1
11		74. 56. 17	76. 21. 29	77. 46. 37	79.11.41	80. 36. 39			
11	Fomal-haut.					50. 9. 12	51. 27. 59	52. 47. 5	54. 6.33
12		55. 26. 24	56. 46. 32	58. 6. 53	59.27.28	60. 48. 16	62. 9. 12	63. 30. 15	64.51.26
13		66. 12. 44	67. 34. 6	68. 55. 31	70.16.59	71. 58. 31	73. 0. 2	74. 21. 34	75.43. 5

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
14	Fomal-haut.	77. 4. 37	78. 26. 6	79. 47. 33	81. 8.58	82. 30. 21	83. 51. 41	85. 12. 57	86.34.10
15		87. 55. 20	89. 16. 25	90. 37. 25	91.58.21	93. 19. 11			
15	α Arietis.					34. 20. 0	35. 42. 59	37. 6. 14	38.29.46
16		39. 53. 35	41. 17. 39	42. 41. 55	44. 6.25	45. 31. 8	46. 55. 59	48. 21. 0	49.46.12
17		51. 11. 34	52. 37. 4	54. 2. 43	55.28.29	56. 54. 23			
17	Aldeba-ran.					22. 51. 31	24. 20. 10	25. 48. 54	27.17.43
18		28. 46. 37	30. 15. 37	31. 44. 44	33.13.58	34. 43. 20	36. 12. 49	37. 42. 28	39.12.16
19		40. 42. 14	42. 12. 23	43. 42. 43	45.13.16	46. 44. 0	48. 14. 57	49. 46. 7	51.17.31
20		52. 49. 10	54. 21. 4	55. 53. 14	57.25.41	58. 58. 24	60. 31. 25	62. 4. 44	63.38.21
21		65. 12. 17	66. 46. 32	68. 21. 8	69. 56. 4	71. 31. 20			
21	Pollux.					30. 20. 19	31. 48. 8	33. 16. 49	34.46.23
22		36. 16. 53	37. 48. 13	39. 20. 16	40.53. 5	42. 26. 40	44. 0. 54	45. 35. 45	47.11.15
23		48. 47. 23	50. 24. 7	52. 1. 26	53.39.19	55. 17. 47	56. 56. 49	58. 36. 22	60.16.27
24		61. 57. 5							
24	Regulus.	24. 59. 50	26. 42. 19	28. 25. 20	30. 8.54	31. 53. 5	33. 37. 42	35. 22. 50	37. 8.27
25		38. 54. 33	40. 41. 6	42. 28. 2	44.15.23	46. 3. 10			
29	The Sun.							39. 35. 52	41.19.34
30		43. 3. 4	44. 46. 21	46. 29. 25	48.12.14	49. 54. 49	51. 37. 8	53. 19. 10	55. 0.56
31		56. 42. 25	58. 23. 37	60. 4. 30	61.45. 6	63. 25. 23	65. 5. 21	66. 44. 58	68.24.14
N.1		70. 3. 11							

The Satellites of JUPITER will not be viſible this Month, JUPITER being too near the Sun.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Tu.	*All Saints.*
2	W.	*Pr. Edward born.*
3	Th.	On mor. of All Souls,
4	F.	[1 ret. *Prs. Sophia b.*
5	Sa.	*Powder-Plot*, 1605.
6	*Su.*	*20th Su. aft. Tr.* Leon^d.
7	M.	*D. of Cum. b.*[M.T. beg.
8	Tu.	*Prs. Aug. Sophia born.*
9	W.	
10	Th.	
11	F.	St. Martin. [C.T. div. m.
12	Sa.	On mor. of St. M. 2 ret.
13	*Su.*	*21ſt Su. aſt. Tr.* Britius.
14	M.	
15	Tu.	Machutus.
16	W.	
17	Th.	Hugh Bp. of Lincoln.
18	F.	In 8 days of S. M. 3 ret.
19	Sa.	
20	*Su.*	*22d Sunday after Trinity.*
21	M.	[Edm. K. and Mart.
22	Tu.	Cecilia.
23	W.	St. Clement.
24	Th.	
25	F.	*D. of Gl. b.* Cath. In 15
26	Sa.	[days of S. Mart. 4 ret.
27	*Su.*	*Advent Sunday.*
28	M.	Mich. Term ends.
29	Tu.	
30	W.	*St. Andrew.*

Phaſes of the Moon.

	D.	H.	M.
Firſt Quarter -	2.	13.	8
Full Moon - -	10.	7.	7
Laſt Quarter - -	18.	11.	12
New Moon - - -	25.	8.	38

Other Phenomena.

D. H. M.	
1.20.42	☾ β ♑
4. 0.31	☾ θ ♒
7.16.51	☾ ζ ♓
9.	♀ Stationary.
11.14.28	☾ 1 ad δ ♉
14.59	☾ 2 ad δ ♉
20.22	☾ α ♉
17. 3.31	☾ 1 ad α ♋
4.34	☾ 2 ad α ♋
9.30	☾ κ ♋
20. 7	☾ ξ ♌
18. 1. 8	☾ ο ♌
10.48	☾ π ♌
20.10.18	☾ υ ♌
21.	♂ χ ♌ diff. Lat.
19.24	☉ enters ♐ [35′.
22.13.38	☾ ♀
14. 3	☾ ♃
23.	♀ ♃ diff. Lat.
5.37	☾ κ ♍ [20′.
9.37	☾ λ ♍
29. 4.26	☾ β ♑
30.	♂ σ ♌ diff. Lat.
	[22′.

NOVEMBER 1791. 11.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Afc. in Time.	Sun's Declin. South.	Equat. of Time. Sub.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	Tu.	7. 9. 2.20	14. 26.34,6	14. 31. 26	16. 13,1	0,6
2	W.	7. 10. 2.31	14. 30.30,6	14. 50. 33	16. 13,7	0,2
3	Th.	7. 11. 2.43	14. 34.27,3	15. 9. 24	16. 13,5	1,0
4	F.	7. 12. 2.57	14. 38.24,8	15. 28. 0	16. 12,5	1,7
5	Sa.	7. 13. 3.12	14. 42.23,1	15. 46. 21	16. 10,8	2,6
6	*Su.*	7. 14. 3.28	14. 46.22,3	16. 4. 26	16. 8,2	3,4
7	M.	7. 15. 3.46	14. 50.22,3	16. 22. 15	16. 4,8	4,3
8	Tu.	7. 16. 4. 5	14. 54.23,1	16. 39. 48	16. 0,5	5,1
9	W.	7. 17. 4.26	14. 58.24,8	16. 57. 3	15. 55,4	5,9
10	Th.	7. 18. 4.49	15. 2.27,3	17. 14. 1	15. 49,5	6,8
11	F.	7. 19. 5.13	15. 6.30,6	17. 30. 41	15. 42,7	7,6
12	Sa.	7. 20. 5.39	15. 10.34,8	17. 47. 3	15. 35,1	8,4
13	*Su.*	7. 21. 6. 7	15. 14.39,8	18. 3. 7	15. 26,7	9,3
14	M.	7. 22. 6.37	15. 18.45,7	18. 18. 52	15. 17,4	10,2
15	Tu.	7. 23. 7. 8	15. 22.52,5	18. 34. 17	15. 7,2	11,1
16	W.	7. 24. 7.41	15. 27. 0,1	18. 49. 23	14. 56,1	11,9
17	Th.	7. 25. 8.16	15. 31. 8,6	19. 4. 8	14. 44,2	12,8
18	F.	7. 26. 8.53	15. 35.18,0	19. 18. 33	14. 31,4	13,6
19	Sa.	7. 27. 9.32	15. 39.28,2	19. 32. 38	14. 17,8	14,4
20	*Su.*	7. 28.10.13	15. 43.39,2	19. 46. 22	14. 3,4	15,3
21	M.	7. 29.10.55	15. 47.51,1	19. 59. 43	13. 48,1	16,1
22	Tu.	8. 0.11.39	15. 52. 3,8	20. 12. 43	13. 32,0	16,9
23	W.	8. 1.12.24	15. 56.17,3	20. 25. 21	13. 15,1	17,7
24	Th.	8. 2.13.11	16. 0.31,6	20. 37. 36	12. 57,4	18,5
25	F.	8. 3.14. 0	16. 4.46,7	20. 49. 28	12. 38,9	19,2
26	Sa.	8. 4.14.50	16. 9. 2,5	21. 0. 56	12. 19,7	20,0
27	*Su.*	8. 5.15.41	16. 13.19,1	21. 12. 0	11. 59,7	20,7
28	M.	8. 6.16.33	16. 17.36,4	21. 22. 41	11. 39,0	21,4
29	Tu.	8. 7.17.26	16. 21.54,4	21. 32. 58	11. 17,6	22,0
30	W.	8. 8.18.21	16. 26.13,0	21. 42. 49	10. 55,6	

Days.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	16. 11,1	1. 6,9	2. 30,3	9.996299	6. 11. 11
7	16. 12,5	1. 7,6	2. 30,8	9.995638	6. 10. 52
13	16. 13,8	1. 8,3	2. 31,2	9.995042	6. 10. 33
19	16. 15,0	1. 9,0	2. 31,7	9.994520	6. 10. 14
25	16. 16,1	1. 9,6	2. 32,0	9.994047	6. 9. 54

Eclipſes of the SATELLITES of JUPITER.

I. Satellite. Immerſions.

Days	H. M. S.
2	9. 55. 44
4	4. 24. 6
5	22. 52. 28
7	17. 20. 46
9	11. 49. 0
11	6. 17. 12
13	0. 45. 23
14	19. 13. 28
16	13. 41. 34
18	8. 9. 34
20	2. 37. 32
21	21. 5. 26
23	15. 33. 19
25	10. 1. 10
27	4. 28. 58
28	22. 56. 45
*30	17. 24. 27

II. Satellite. Immerſions.

Days	H. M. S.
1	1. 28. 58
4	14. 46. 32
8	4. 3. 44
11	17. 20. 40
15	6. 37. 20
18	19. 53. 48
22	9. 9. 57
25	22. 25. 55
29	11. 41. 45

III. Satellite.

Days	H. M. S.	
7	6. 26. 6	I
7	8. 38. 51	E
14	10. 23. 21	I
14	12. 35. 6	E
21	14. 19. 51	I
21	16. 30. 36	E
*28	18. 15. 34	I
28	20. 25. 20	E

IV. Satellite. Conj.

2	12. 46	Sup.
10	22. 42	Inf.
19	9. 0	Sup.
*27	18. 48	Inf.

NOVEMBER 1791. IV.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Passage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
MERCURY. Sup. ☌ 23^{d}. 3^{h}.						
1	5. 18. 30	5. 54 N	6. 25. 49	1. 45 N	8. 21 S	23. 14
4	6. 0. 42	4. 59	7. 0. 40	1. 29	10. 19	23. 20
7	6. 11. 52	3. 56	7. 5. 32	1. 11	12. 16	23. 26
10	6. 22. 11	2. 49	7. 10. 24	0. 52	14. 8	23. 32
13	7. 1. 51	1. 42	7. 15. 14	0. 32	15. 55	23. 38
16	7. 10. 59	0. 36 N	7. 20. 2	0. 11 N	17. 36	23. 45
19	7. 19. 44	0. 28 S	7. 24. 49	0. 9 S	19. 8	23. 52
22	7. 28. 13	1. 30	7. 29. 34	0. 29	20. 33	23. 59
25	8. 6. 32	2. 29	8. 4. 17	0. 47	21. 48	0. 4
28	8. 14. 46	3. 24	8. 9. 0	1. 6	22. 54	0. 11
30	8. 20. 16	3. 58	8. 12. 8	1. 17	23. 32	0. 16
VENUS.						
1	1. 16. 41	1. 36 S	6. 19. 49	3. 57 S	11. 25 S	22. 36
7	1. 26. 19	1. 5	6. 18. 32	2. 28	9. 33	22. 11
13	2. 5. 58	0. 31 S	6. 18. 44	1. 5 S	8. 21	21. 50
19	2. 15. 38	0. 3 N	6. 20. 17	0. 6 N	7. 51	21. 34
25	2. 25. 19	0. 37	6. 22. 59	1. 4	7. 57	21. 20
MARS.						
1	3. 26. 25	1, 43 N	5. 0. 45	1. 38 N	12. 45 N	19. 46
7	3. 29. 8	1. 45	5. 4. 0	1. 43	11. 39	19. 34
13	4. 1. 50	1. 47	5. 7. 11	1. 48	10. 34	19. 22
19	4. 4. 31	1. 48	5. 10. 17	1. 54	9. 29	19. 9
25	4. 7. 12	1. 49	5. 13. 17	1. 59	8. 25	18. 55
JUPITER.						
1	6. 14. 1	1. 19 N	6. 17. 48	1. 8 N	5. 57 S	22. 38
7	6. 14. 29	1. 19	6. 19. 3	1. 8	6. 25	22. 19
13	6. 14. 55	1. 19	6. 20. 16	1. 8	6. 52	21. 59
19	6. 15. 23	1. 19	6. 21. 27	1. 9	7. 19	21. 39
25	6. 15. 50	1. 19	6. 22. 36	1. 10	7. 44	21. 17
SATURN.						
1	0. 16. 17	2. 30 S	0. 13. 41	2. 46 S	2. 52 N	10. 26
7	0. 16. 30	2. 30	0. 13. 18	2. 45	2. 44	10. 1
13	0. 16. 42	2. 30	0. 12. 58	2. 44	2. 37	9. 36
19	0. 16. 55	2. 30	0. 12. 40	2. 42	2. 31	9. 10
25	0. 17. 7	2. 30	0. 12. 26	2. 41	2. 27	8. 44

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	Tu.	9. 19. 0.21	9. 26. 4.53	5.11.58 N	5. 5.18 N
2	W.	10. 3. 3.50	10. 9.57. 9	4.54. 9	4.38.53
3	Th.	10. 16.44.54	10. 23.27.17	4.19.54	3.57.33
4	F.	11. 0. 4.31	11. 6.36.54	3.32.19	3. 4.34
5	Sa.	11. 13. 4.47	11. 19.28.30	2.34.48	2. 3.24
6	*Su.*	11. 25.48.25	0. 2. 4.54	1.30.47	0.57.23 N
7	M.	0. 8.18.18	0. 14.28.53	0.23.36 N	0.10.10 S
8	Tu.	0. 20.37. 2	0. 26.42.55	0.43.35 S	1.16.15
9	W.	1. 2.46.53	1. 8.49. 5	1.47.49	2.18. 1
10	Th.	1. 14.49.46	1. 20.49. 6	2.46.28	3.12.57
11	F.	1. 26.47.17	2. 2.44.30	3.37.12	3.58.58
12	Sa.	2. 8.40.55	2. 14.36.50	4.18. 5	4.34.21
13	*Su.*	2. 20.32.24	2. 26.27.56	4.47.38	4.57.49
14	M.	3. 2.23.41	3. 8.20. 3	5. 4.48	5. 8.30
15	Tu.	3. 14.17.19	3. 20.15.56	5. 8.53	5. 5.54
16	W.	3. 26.16.18	4. 2.18.56	4.59.33	4.49.50
17	Th.	4. 8.24.19	4. 14.32.59	4.36.46	4.20.25
18	F.	4. 20.45.31	4. 27. 2.24	4. 0.50	3.38. 8
19	Sa.	5. 3.24.15	5. 9.51.32	3.12.27	2.43.58
20	*Su.*	5. 16.24.53	5. 23. 4.39	2.12.53	1.39.31
21	M.	5. 29.51.16	6. 6.44.59	1. 4.12 S	0.27.21 S
22	Tu.	6. 13.45.55	6. 20.53.59	c.10.30 N	0.48.49 N
23	W.	6. 28. 9. 1	7. 5.30.30	1.26.54	2. 4. 4
24	Th.	7. 12.57.46	7. 20.29.56	2.39.35	3.12.38
25	F.	7. 28. 5.54	8. 5.44.21	3.42.29	4. 8.27
26	Sa.	8. 13.23.56	8. 21. 3.11	4.30. 2	4.46.43
27	*Su.*	8. 28.40.43	9. 6.15. 7	4.58.14	5. 4.25
28	M.	9. 13.45.13	9. 21.10. 2	5. 5.18	5. 1. 0
29	Tu.	9. 28.28.43	10. 5.40.40	4.51.49	4.38. 8
30	W.	10. 12.45.36	10. 19.43.19	4.20.22	3.58.59

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Passage over Merid.	☽'s Right Aſcenſion at Noon.	☽'s Right Aſcenſ. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	Tu.	7	5. 4	289. 49	297. 6	16.58 S	15.57 S
2	W.	8	5. 59	304. 12	311. 7	14.43	13.17
3	Th.	9	6, 50	317. 52	324.28	11.42	9.59
4	F.	10	7. 40	330. 54	337.13	8. 9	6.14
5	Sa.	11	8. 27	343. 25	349.31	4.16	2.17 S
6	*Su.*	12	9. 13	355. 33	1.32	0.17 S	1.42 N
7	M.	13	9. 58	7. 28	13.24	3.40 N	5.34
8	Tu.	14	10. 42	19. 19	25.15	7.24	9. 8
9	W.	15	11. 27	31. 12	37.11	10.46	12.17
10	Th.	16	12. 13	43. 12	49.15	13.39	14.52
11	F.	17	12. 59	55. 21	61.29	15.56	16.50
12	Sa.	18	13. 46	67. 39	73.51	17.32	18. 2
13	*Su.*	19	14. 34	80. 4	86.17	18.21	18.28
14	M.	20	15. 21	92. 31	98.44	18.22	18. 4
15	Tu.	21	16. 8	104. 56	111. 8	17.35	16.54
16	W.	22	16. 54	117. 18	123.28	16. 1	14.58
17	Th.	23	17. 40	129. 36	135.44	13.44	12.20
18	F.	24	18. 27	141. 52	148. 0	10.47	9. 6
19	Sa.	25	19. 14	154. 10	160.22	7.17	5.21
20	*Su.*	26	20. 2	166. 38	172.59	3.20 N	1.14 N
21	M.	27	20. 53	179. 26	186. 1	0.55 S	3. 6 S
22	Tu.	28	21. 46	192. 44	199.37	5.17	7.25
23	W.	29	22. 42	206. 40	213.54	9.28	11.25
24	Th.	30	23. 42	221. 20	228.56	13.13	14.48
25	F.	1	☌	236. 42	244.36	16. 9	17.13
26	Sa.	2	0. 43	252. 35	260.36	17.58	18.23
27	*Su.*	3	1. 45	268. 37	276.34	18.29	18.15
28	M.	4	2. 46	284. 24	292. 5	17.41	16.50
29	Tu.	5	3. 45	299. 35	306.53	15.43	14.22
30	W.	6	4. 40	313. 59	320.52	12.50	11. 8

VII. NOVEMBER 1791.

Days of the Month.	Days of the Week.	Semid^r. ☽ at Noon.	Semid^r. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	Tu.	16. 13	16. 7	59. 29	59. 8	4809	4834
2	W.	16. 1	15. 55	58. 46	58. 24	4861	4889
3	Th.	15. 49	15. 43	58. 2	57. 40	4916	4943
4	F.	15. 37	15. 32	57. 19	56. 59	4970	4995
5	Sa.	15. 26	15. 21	56. 39	56. 21	5021	5044
6	*Su.*	15. 17	15. 12	56. 4	55. 48	5065	5086
7	M.	15. 8	15. 5	55. 34	55. 20	5104	5123
8	Tu.	15. 1	14. 58	55. 8	54. 56	5138	5154
9	W.	14. 55	14. 53	54. 46	54. 37	5167	5179
10	Th.	14. 51	14. 49	54. 29	54. 22	5190	5199
11	F.	14. 48	14. 46	54. 17	54. 12	5206	5213
12	Sa.	14. 45	14. 45	54. 9	54. 7	5217	5219
13	*Su.*	14. 45	14. 45	54. 6	54. 7	5221	5219
14	M.	14. 46	14. 47	54. 11	54. 16	5214	5207
15	Tu.	14. 49	14. 51	54. 23	54. 31	5198	5187
16	W.	14. 54	14. 58	54. 42	54. 56	5173	5154
17	Th.	15. 2	15. 7	55. 12	55. 30	5133	5110
18	F.	15. 13	15. 19	55. 51	56. 14	5082	5953
19	Sa.	15. 26	15. 33	56. 38	57. 4	5022	4989
20	*Su.*	15. 41	15. 49	57. 32	58. 1	4953	4917
21	M.	15. 57	16. 4	58. 30	58. 59	4881	4845
22	Tu.	16. 12	16. 20	59. 28	59. 55	4810	4777
23	W.	16. 26	16. 32	60. 20	60. 42	4747	4721
24	Th.	16. 38	16. 42	61. 1	61. 16	4698	4680
25	F.	16. 44	16. 46	61. 26	61. 31	4669	4663
26	Sa.	16. 46	16. 45	61. 32	61. 28	4661	4666
27	*Su.*	16. 42	16. 38	61. 18	61. 4	4678	4694
28	M.	16. 34	16. 28	60. 46	60. 24	4716	4742
29	Tu.	16. 21	16. 14	60. 1	59. 36	4770	4800
30	W.	16. 7	15. 59	59. 9	58. 41	4833	4867

Diſtances of ☽'s Center from Sun, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	α Pegaſi.	61. 30. 27	59. 50. 41	58. 11. 27	56. 32. 45	54. 54. 38	53. 17. 7	51. 40. 17	50. 4. 8
2		48. 28. 41	46. 53. 55	45. 20. 1	43. 46. 58	42. 14. 48	40. 43. 37	39. 13. 27	37. 44. 21
3		36. 16. 23							
3	α Arietis.	77. 27. 46	75. 49. 7	74. 10. 48	72. 32. 50	70. 55. 11	69. 17. 52	67. 40. 54	66. 4. 16
4		64. 27. 59	62. 52. 2	61. 16. 26	59. 41. 12	58. 6. 18	56. 31. 45	54. 57. 33	53. 23. 44
5		51. 50. 17	50. 17. 12	48. 44. 31	47. 12. 15	45. 40. 23	44. 8. 57	42. 37. 59	41. 7. 28
6		39. 37. 24							
6	Aldebaran.	71. 19. 48	69. 45. 4	68. 10. 31	66. 36. 10	65. 2. 1	63. 28. 3	61. 54. 16	60. 20. 39
7		58. 47. 14	57. 13. 59	55. 40. 54	54. 8. 0	52. 35. 15	51. 2. 39	49. 30. 12	47. 57. 54
8		46. 25. 46	44. 53. 47	43. 21. 56	41. 50. 14	40. 18. 40	38. 47. 13	37. 15. 55	35. 44. 44
9		34. 13. 42	32. 42. 47	31. 12. 0	29. 41. 21	28. 10. 49	26. 40. 24	25. 10. 6	23. 39. 55
10		22. 9. 51							
10	Pollux.	66. 5. 8	64. 37. 21	63. 9. 43	61. 42. 14	60. 14. 54	58. 47. 44	57. 20. 44	55. 53. 55
11		54. 27. 16	53. 0. 47	51. 34. 31	50. 8. 26	48. 42. 33	47. 16. 54	45. 51. 28	44. 26. 17
12		43. 1. 20							
12	Regulus.	78. 19. 36	76. 50. 58	75. 22. 23	73. 53. 51	72. 25. 22	70. 56. 56	69. 28. 32	68. 0. 10
13		66. 31. 49	65. 3. 29	63. 35. 9	62. 6. 50	60. 38. 32	59. 10. 15	57. 41. 57	56. 13. 39
14		54. 45. 21	53. 17. 1	51. 48. 40	50. 20. 17	48. 51. 53	47. 23. 26	45. 54. 57	44. 26. 24

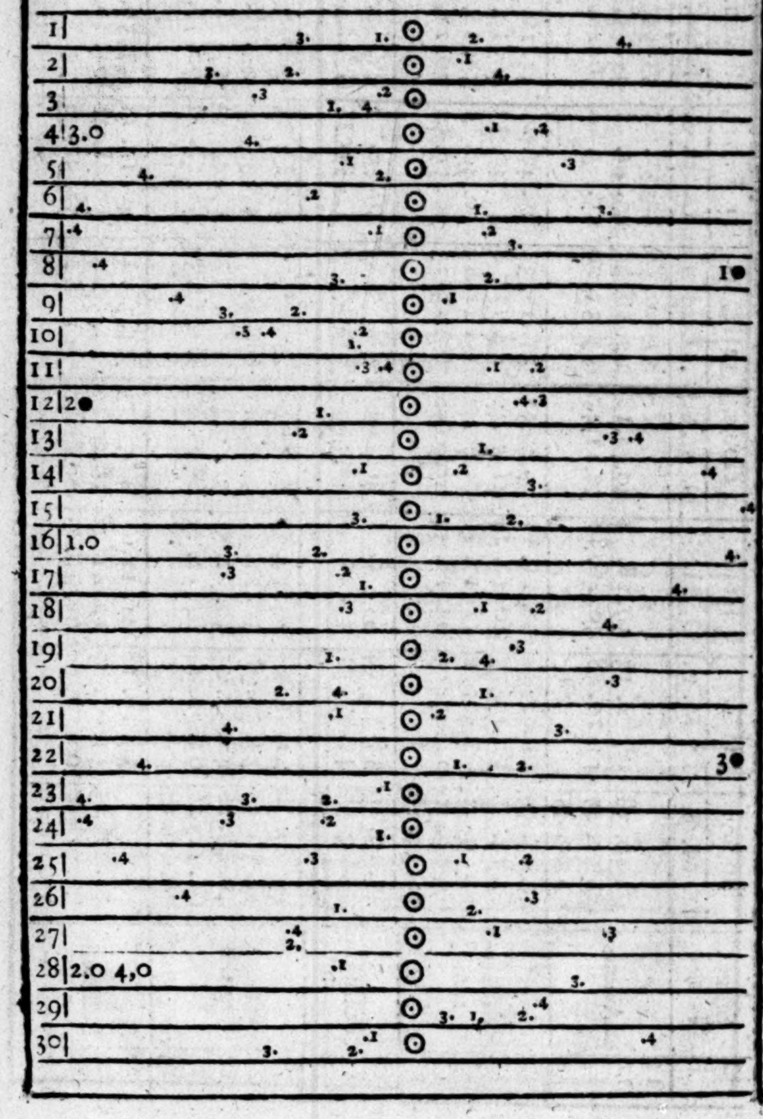
Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
15	Regulus.	42. 57. 49	41. 29. 10	40. 0. 28	38. 31. 41	37. 2. 51	35. 33. 56	34. 4. 58	32. 35. 54
16		31. 6. 47	29. 37. 35	28. 8. 19	26. 38. 59	25. 9. 34			
16	Spica ♍					78. 29. 37	76. 58. 56	75. 28. 4	73. 56. 59
17		72. 25. 43	70. 54. 13	69. 22. 30	67. 50. 32	66. 18. 20	64. 45. 52	63. 13. 8	61. 40. 8
18		60. 6. 51	58. 33. 17	56. 59. 26	55. 25. 17	53. 50. 49			
15	The Sun.							120. 28. 46	119. 6. 42
16		117. 44. 29	116. 22. 7	114. 59. 35	113. 36. 53	112. 14. 1	110. 50. 58	109. 27. 43	108. 4. 15
17		106. 40. 36	105. 16. 43	103. 52. 36	102. 28. 15	101. 3. 39	99. 38. 48	98. 13. 40	96. 48. 16
18		95. 22. 35	93. 56. 37	92. 30. 21	91. 3. 46	89. 36. 53	88. 9. 38	86. 42. 4	85. 14. 8
19		83. 45. 52	82. 17. 16	80. 48. 16	79. 18. 55	77. 49. 11	76. 19. 2	74. 48. 29	73. 17. 31
20		71. 46. 10	70. 14. 24	68. 42. 13	67. 9. 36	65. 36. 34	64. 3. 5	62. 29. 10	60. 54. 49
21		59. 20. 1	57. 44. 46	56. 9. 4	54. 32. 56	52. 56. 22	51. 19. 21	49. 41. 54	48. 4. 2
22		46. 25. 44	44. 47. 1	43. 7. 54	41. 28. 23	39. 48. 27			
27	α Pegasi.	80. 44. 13	78. 56. 8	77. 8. 21	75. 20. 53	73. 33. 44	71. 46. 57	70. 0. 35	68. 14. 39
28		66. 29. 8	64. 44. 6	62. 59. 36	61. 15. 39	59. 32. 14	57. 49. 24	56. 7. 16	54. 25. 48
29		52. 45. 1	51. 5. 0	49. 25. 47	47. 47. 24	46. 9. 53			
29	α Arietis.					88. 17. 50	86. 33. 31	84. 49. 37	83. 6. 10
30		81. 23. 9	79. 40. 34	77. 58. 26	76. 16. 45	74. 35. 30	72. 54. 42	71. 14. 22	69. 34. 29
D. 1		67. 55. 3							

Diſtances of ☽'s Center from Sun, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	The Sun.	70. 3. 10	71. 41. 48	73. 20. 6	74.58. 4	76. 35. 42	78. 13. 0	79. 49. 57	81.26.35
2		83. 2. 52	84. 38. 49	86. 14. 26	87.49.43	89. 24. 40	90. 59. 17	92. 33. 35	94. 7.33
3		95. 41. 12	97. 14. 32	98. 47. 34	100.20.17	101. 52. 42	103. 24. 49	104. 56. 39	106.28.11
4		107. 59. 26	109. 30. 24	111. 1. 5	112.31.30	114. 1. 38	115. 31. 30	117. 1 7	118.30.29
5		119. 59. 35							
2	Antares.					63. 41. 42	65. 22. 27	67. 2. 55	68.43. 6
3		70. 23. 0	72. 2. 37	73. 41. 58	75.21. 2	76. 59. 50	78. 38. 20	80. 16. 34	81.54.32
4		83. 32. 13	85. 9. 38	86. 46. 47	88.23.41	90. 0. 19	91. 36. 42	93. 12. 49	94.48.42
5		96. 24. 19	97. 59. 41	99. 34. 49	101. 9.42	102. 44. 21			
5	α Aquilæ.					55. 14. 8	56. 37. 10	58. 0. 22	59.23.46
6		60. 47. 22	62. 11. 7	63. 34. 58	64.58.55	66. 22. 58	67. 47. 4	69. 11. 12	70.35.22
7		71. 59. 34	73. 23. 44	74. 47. 53	76.12. 1	77. 36. 7	79. 0. 11	80. 24. 11	81.48. 7
8		83. 12. 0							
8	Fomalhaut.	52. 33. 2	53. 51. 46	55. 10. 48	56.30. 9	57. 49. 51	59. 9. 47	60. 29. 56	61.50.18
9		63. 10. 52	64. 31. 33	65. 52. 21	67.13.17	68. 34. 21	69. 55. 30	71. 16. 42	72.37.58
10		73. 59. 18	75. 20. 39	76. 42. 1	78. 3.24	79. 24. 48	80. 46. 12	82. 7. 34	83.28.56
11		84. 50. 16	86. 11. 34	87. 32. 50	88.54. 2	90. 15. 11			

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
11	α Arietis.					31. 9.58	32.32. 5	33.54.31	35.17.22
12		36.40.38	38. 4.13	39.28. 4	40.52.12	42.16.35	43.41. 7	45. 5.50	46.30.43
13		47.55.47	49.20.58	50.46.18	52.11.45	53.37.20	55. 3. 2	56.28.50	57.54.45
14		59.20.45							
14	Aldebaran.	25.23.59	26.52.34	28.21.11	29.49.51	31.18.34	32.47.20	34.16.11	35.45. 7
15		37.14. 7	38.43.13	40.12.24	41.41.42	43.11. 6	44.40.37	46.10.16	47.40. 3
16		49. 9.58	50.40. 2	52.10.16	53.40.41	55.11.15	56.42. 0	58.12.58	59.44. 8
17		61.15.30	62.47. 5	64.18.54	65.50.58	67.23.17	68.55.52	70.28.43	72. 1.50
18		73.35.16							
18	Pollux.	32.10.29	33.37.24	35. 5. 2	36.33.24	38. 2.32	39.32.21	41. 2.45	42.33.52
19		44. 5.37	45.37.51	47.10.42	48.44. 6	50.18. 4	51.52.35	53.27.38	55. 3.13
20		56.39.20							
20	Regulus.	19.39. 8	21.16.41	22.54.52	24.33.40	26.13. 9	27.53.13	29.33.51	31.15. 4
21		32.56.51	34.39. 8	36.21.57	38. 5.17	39.49. 8	41.33.29	43.18.19	45. 3.39
22		46.49.28	48.35.45	50.22.30	52. 9.43	53.57.23	55.45.31	57.34. 4	59.23. 2
23		61.12.26	63. 2.14	64.52.25	66.42.58	68.33.54	70.25.11	72.16.47	74. 8.42
24		76. 0.57							
28	The Sun.		39.29.18	41.12. 0	42.54.23	44.36.27	46.18.11	47.59.33	49.40.34
29		51.21.13	53. 1.27	54.41.18	56.20.45	57.59.49	59.38.28	61.16.43	62.54.33
30		64.31.58	66. 8.57	67.45.31	69.21.40	70.57.24	72.32.43	74. 7.37	75.42. 6
D.1		77.16.10							

Configurations of the SATELLITES of JUPITER at Six o'Clock in the Morning.



Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Th.	
2	F.	
3	Sa.	
4	*Su.*	*1ſt Sunday in Advent.*
5	M.	
6	Tu.	Nicholas.
7	W.	
8	Th.	Conception of V. Mary.
9	F.	
10	Sa.	
11	*Su.*	*2d Sunday in Advent.*
12	M.	
13	Tu.	Lucy.
14	W.	
15	Th.	
16	F.	O Sap. Camb. T. ends.
17	Sa.	Oxford Term ends.
18	*Su.*	*3d Sunday in Advent.*
19	M.	
20	Tu.	
21	W.	*St. Thomas.*
22	Th.	
23	F.	
24	Sa.	
25	*Su.*	*4th Su. in Adv. Chriſtmas* *[Day.*
26	M.	*St. Stephen.*
27	Tu.	*St. John.*
28	W.	*Innocents.*
29	Th.	
30	F.	
31	Sa.	Silveſter.

Phaſes of the Moon.	D.	H.	M.
Firſt Quarter –	2.	0.	51
Full Moon – –	10.	2.	4
Laſt Quarter –	18.	2.	17
New Moon – –	24.	18.	49
Firſt Quarter –	31.	16.	21

Other Phenomena. D.H.M.	
1. 7. 7	Im. of θ ♒ * 6′ N. of ☾'s cent.
8.22	Em. * 4′½ N.
4.22.27	☾ ζ ♓ [27′.
7.	♀ κ ♍ diff. Lat.
8.20.32	☾ 1 ad δ ♉
21. 4	☾ 2 ad δ ♉
9. 2.27	☾ α ♉ [44′.
14.	♂ ν ♌ diff. Lat.
9.32	☾ 1 ad α ♋
10.36	☾ 2 ad α ♋
15.	♄ Stationary.
2.19	☾ ξ ♌
7.23	☾ ο ♌
16.25¼	Im. of π ♌ * 8′N. of ☾'s cent.
17.32¼	Em. * 9′ N.
17.11.21	☾ τ ♌
19.11.39	☾ θ ♍
20. 7.38	☾ ♃
15.33	☾ κ ♍
21. 7.46	☉ enters ♑
11.34	☾ ♀
22. 1.26	☾ 4 ad ζ ♎
1.36	☾ γ ♎
5.12	☾ η ♎
9.12	☾ θ ♎
28.15.11	☾ θ ♒

DECEMBER 1791. II.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Aſc. in Time.	Sun's Declin. South.	Equat. of Time Sub.	Diff.
		S. D.M.S.	H. M. S.	D. M. S.	M. S.	S.
1	Th.	8. 9.19.16	16. 30.32,3	21.52.16	10.33,0	23,2
2	F.	8. 10.20.12	16. 34.52,1	22. 1.16	10. 9,8	23,8
3	Sa.	8. 11.21. 8	16. 39.12,5	22. 9.51	9.46,0	24,4
4	*Su.*	8. 12.22. 5	16. 43.35,5	22.18. 1	9.21,6	25,0
5	M.	8. 13.23. 3	16. 47.55,1	22.25.45	8.56,6	25,5
6	Tu.	8. 14.24. 2	16. 52.17,2	22.33. 3	8.31,1	25,9
7	W.	8. 15.25. 1	16. 56.39,8	22.39.54	8. 5,2	26,4
8	Th.	8. 16.26. 1	17. 1. 2,9	22.46.18	7.38,8	26,9
9	F.	8. 17.27. 1	17. 5.26,3	22.52.15	7.11,9	27,3
10	Sa.	8. 18.28. 2	17. 9.50,2	22.57.45	6.44,6	27,7
11	*Su.*	8. 19.29. 4	17. 14.14,6	23. 2.48	6.16,9	28,1
12	M.	8. 20.30. 7	17. 18.39,3	23. 7.24	5.48,8	28,4
13	Tu.	8. 21.31.11	17. 23. 4,4	23.11.32	5.20,4	28,7
14	W.	8. 22.32.15	17. 27.29,8	23.15.12	4.51,7	29,0
15	Th.	8. 23.33.20	17. 31.55,4	23.18.24	4.22,7	29,2
16	F.	8. 24.34.26	17. 36.21,2	23.21. 8	3.53,5	29,5
17	Sa.	8. 25.35.33	17. 40.47,3	23.23.24	3.24,0	29,7
18	*Su.*	8. 26.36.41	17. 45.13,6	23.25.12	2.54,3	29,9
19	M.	8. 27.37.50	17. 49.40,1	23.26.32	2.24,4	30,0
20	Tu.	8. 28.39. 0	17. 54. 6,8	23.27.24	1.54,4	30,1
21	W.	8. 29.40.11	17. 58.33,6	23.27.48	1.24,3	30,2
22	Th.	9. 0.41.22	18. 3. 0,5	23.27.43	0.54,1	30,2
23	F.	9. 1.42.34	18. 7.27,3	23.27. 9	0.23,9	30,2
24	Sa.	9. 2.43.46	18. 11.54,1	23.26. 7	Ad:6,3	30,1
25	*Su.*	9. 3.44.58	18. 16.20,8	23.24.37	0.36,4	30,0
26	M.	9. 4.46.11	18. 20.47,4	23.22.39	1. 6,4	29,8
27	Tu.	9. 5.47.24	18. 25.13,9	23.20.13	1.36,2	29,7
28	W.	9. 6.48.37	18. 29.40,2	23.17.18	2. 5,9	29,5
29	Th.	9. 7.49.49	18. 34. 6,3	23.13.55	2.35,4	29,2
30	F.	9. 8.51. 1	18. 38.32,1	23.10. 4	3. 4,6	28,9
31	Sa.	9. 9 52.13	18. 42.57,6	23. 5.45	3.33,5	

III. DECEMBER 1791.

Days.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	16. 17,1	1. 10,2	2. 32,2	9. 993619	6. 9. 35
7	16. 17,9	1. 10,7	2. 32,5	9. 993253	6. 9. 16
13	16. 18,5	1. 11,0	2. 32,7	9. 992977	6. 8. 57
19	16. 19,0	1. 11,1	2. 32,8	9. 992800	6. 8. 38
25	16. 19,2	1. 11,2	2. 32,9	9. 992695	6. 8. 19

Eclipses of the Satellites of JUPITER.

I. Satellite. Immerſions.	
Days	H. M. S.
2	11. 52. 9
4	6. 19. 49
6	0. 47. 26
7	19. 15. 0
9	13. 42. 33
11	8. 10. 6
13	2. 37. 38
14	21. 5. 9
16	15. 32. 39
18	10. 0. 7
20	4. 27. 35
21	22. 55. 4
*23	17. 22. 32
25	11. 50. 0
27	6. 17. 29
29	0. 44. 58
30	19. 12. 27

II. Satellite. Immerſions.	
Days	H. M. S.
3	0. 57. 21
6	14. 12. 45
10	3. 27. 58
*13	16. 43. 4
17	5. 58. 4
20	19. 12. 59
24	8. 27. 49
27	21. 42. 37
31	10. 57. 20

III. Satellite.		
Days.	H. M. S.	
5	22. 10. 40	I
6	0. 19. 27	E
13	2. 5. 18	I
13	4. 13. 8	E
20	5. 59. 39	I
20	8. 6. 31	E
27	9. 53. 53	I
27	11. 59. 49	E

IV. Satellite.		Conj.
6	4. 51	Sup.
14	14. 27	Inf.
23	0. 12	Sup.
31	9. 30	Inf.

DECEMBER 1791. IV.

Days.	Heliocentric Longitude	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Passage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
			MERCURY.			
1	8. 23. 2	4. 14 S	8. 13. 42	1. 22 S	23. 50 S	0. 18
4	9. 1. 24	5. 0	8. 18. 24	1. 37	24. 34	0. 25
7	9. 9. 59	5. 41	8. 23. 6	1. 56	25. 7	0. 33
10	9. 18. 53	6. 15	8. 27. 48	2. 0	25. 27	0. 40
13	9. 28. 12	6. 40	9. 2. 30	2. 8	25. 35	0. 48
16	10. 8. 4	6. 56	9. 7. 12	2. 13	25. 29	0. 56
19	10. 18. 37	7. 0	9. 11. 52	2. 13	25. 9	1. 3
22	11. 0. 1	6. 47	9. 16. 28	2. 9	24. 35	1. 10
25	11. 12. 25	6. 16	9. 20. 56	2. 0	23. 48	1. 16
28	11. 25. 59	5. 22	9. 25. 10	1. 43	22. 49	1. 20
31	0. 10. 52	4. 2	9. 29. 0	1. 19	21. 41	1. 23
			VENUS. Gr. Elong. 29^d.			
1	3. 5. 1	1. 10 N	6. 26. 36	1. 50 N	8. 34 S	21. 10
7	3. 14. 45	1. 42	7. 0. 56	2. 25	9. 33	21. 1
13	3. 24. 29	2. 10	7. 5. 51	2. 51	10. 48	20. 54
19	4. 4. 14	2. 35	7. 11. 14	3. 8	12. 15	20. 49
25	4. 14. 0	2. 55	7. 16. 59	3. 17	13. 47	20. 45
			MARS. □ 13^d. $2\frac{1}{4}^h$.			
1	4. 9. 52	1. 50 N	5. 16. 11	2. 5 N	7. 23 N	18. 40
7	4. 12. 31	1. 50	5. 18. 57	2. 11	6. 23	18. 24
13	4. 15. 10	1. 51	5. 21. 35	2. 18	5. 27	18. 8
19	4. 17. 49	1. 51	5. 24. 5	2. 24	4. 34	17. 50
25	4. 20. 27	1. 51	5. 26. 24	2. 31	3. 45	17. 32
			JUPITER.			
1	6. 16. 18	1. 19 N	6. 23. 43	1. 10 N	8. 8 S	20. 56
7	6. 16. 45	1. 18	6. 24. 47	1. 11	8. 30	20. 34
13	6. 17. 12	1. 18	6. 25. 47	1. 12	8. 52	20. 11
19	6. 17. 39	1. 18	6. 26. 44	1. 13	9. 11	19. 48
25	6. 18. 7	1. 18	6. 27. 36	1. 14	9. 29	19. 25
			SATURN.			
1	0. 17. 20	2. 30 S	0. 12. 15	2. 40 S	2. 24 N	8. 17
7	0. 17. 32	2. 30	0. 12. 8	2. 38	2. 23	7. 51
13	0. 17. 45	2. 30	0. 12. 5	2. 36	2. 23	7. 24
19	0. 17. 57	2. 30	0. 12. 6	2. 35	2. 25	6. 58
25	0. 18. 10	2. 30	0. 12. 11	2. 33	2. 28	6. 31

V. DECEMBER 1791.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D.M. S.	D.M.S.
1	Th.	10. 26.33.55	11. 3.17.31	3.34.31 N	3. 7.28 N
2	F.	11. 9.54.34	11. 16.25.26	2.38.16	2. 7.28
3	Sa.	11. 22.50.34	11. 29.10.37	1.35.28	1. 2.43 N
4	*Su.*	0. 5.26. 4	0. 11.37.30	0.29.38 N	0. 3.27 S
5	M.	0. 17.45.30	0. 23.50.33	0.36. 8 S	1. 8. 8
6	Tu.	0. 29.53.11	1. 5.53.50	1.39. 5	2. 8.44
7	W.	1. 11.52.55	1. 17.50.50	2.36.45	3. 2.56
8	Th.	1. 23.47.51	1. 29.44.18	3.26.59	3.48.42
9	F.	2. 5.40.23	2. 11.36.21	4. 7.53	4.24.19
10	Sa.	2. 17.32.22	2. 23.28.36	4.37.53	4.48.24
11	*Su.*	2. 29.25.12	3. 5.22.21	4.55.48	4.59.58
12	M.	3. 11.20.10	3. 17.18.55	5. 0.51	4.58.25
13	Tu.	3. 23.18.42	3. 29.19.50	4.52.42	4.43.40
14	W.	4. 5.22.32	4. 11.27. 9	4.31.26	4.16. 2
15	Th.	4. 17.34. 1	4. 23.43.32	3.57.35	3.36.14
16	F.	4. 29.56. 9	5. 6.12.20	3.12. 6	2.45.27
17	Sa.	5. 12.32.35	5. 18.57.23	2.16.24	1.45.20
18	*Su.*	5. 25.27.19	6. 2. 2.47	1.12.26	0.38. 7 S
19	M.	6. 8.44.22	6. 15.32.20	0. 2.45 S	0.33.12 N
20	Tu.	6. 22.27. 4	6. 29.28.45	1. 9.14 N	1.44.49
21	W.	7. 6.37.21	7. 13.52.45	2.19.18	2.52. 2
22	Th.	7. 21.14.32	7. 28.42. 8	3.22.21	3.49.35
23	F.	8. 6.14.40	8. 13.51. 4	4.13. 6	4.32.17
24	Sa.	8. 21.30. 4	8. 29.10.14	4.46.43	4.55.59
25	*Su.*	9. 6.50. 9	9. 14.28.14	4.59.56	4.58.29
26	M.	9. 22. 3. 7	9. 29.33.27	4.51.46	4.40. 4
27	Tu.	10. 6.58. 8	10. 14.16.20	4.23.44	4. 3.17
28	W.	10. 21.27.22	10. 28.30.52	3.39.14	3.12.12
29	Th.	11. 5.26.40	11. 12.14.50	2.42.44	2.11.27
30	F.	11. 18.55.35	11. 25.29.18	1.38.52	1. 5.31 N
31	Sa.	0. 1.56.26	0. 8.17.37	0.31.51 N	0. 1.44 S

DECEMBER 1791.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſs-age over Merid. H. M.	☽'s Right Aſcenſ. at Noon. D. M.	☽'s Right Aſcenſ. at Midn. D. M.	☽'s De-clination at Noon. D. M.	☽'s De-clination at Midn. D. M.
1	Th.	7	5. 31	327. 34	334. 5	9. 18 S	7. 23 S
2	F.	8	6. 18	340. 27	346. 41	5. 25	3. 24 S
3	Sa.	9	7. 5	352. 48	358. 50	1. 23 S	0. 38 N
4	*Su.*	10	7. 50	4. 47	10. 42	2. 37 N	4. 33
5	M.	11	8. 34	16. 36	22. 29	6. 25	8. 12
6	Tu.	12	9. 18	28. 23	34. 19	9. 54	11. 28
7	W.	13	10. 3	40. 16	46. 15	12. 55	14. 14
8	Th.	14	10. 49	52. 18	58. 23	15. 24	16. 23
9	F.	15	11. 35	64. 31	70. 42	17. 12	17. 50
10	Sa.	16	12. 21	76. 55	83. 9	18. 16	18. 30
11	*Su.*	17	13. 8	89. 24	95. 39	18. 31	18. 21
12	M.	18	13. 55	101. 53	108. 6	17. 59	17. 24
13	Tu.	19	14. 42	114. 18	120. 28	16. 38	15. 41
14	W.	20	15. 28	126. 36	132. 42	14. 33	13. 15
15	Th.	21	16. 13	138. 47	144. 51	11. 48	10. 13
16	F.	22	16. 59	150. 54	156. 57	8. 30	6. 41
17	Sa.	23	17. 45	163. 2	169. 10	4. 46	2. 46 N
18	*Su.*	24	18. 32	175. 21	181. 37	0. 42 N	1. 24 S
19	M.	25	19. 22	188. 0	194. 31	3. 31 S	5. 37
20	Tu.	26	20. 14	201. 11	208. 2	7. 41	9. 40
21	W.	27	21. 10	215. 4	222. 18	11. 33	13. 17
22	Th.	28	22. 9	229. 44	237. 21	14. 50	16. 9
23	F.	29	23. 11	245. 8	253. 3	17. 13	17. 59
24	Sa.	1	☌	261. 4	269. 8	18. 25	18. 32
25	*Su.*	2	0. 13	277. 10	285. 9	18. 18	17. 44
26	M.	3	1. 14	293. 1	300. 43	16. 51	15. 41
27	Tu.	4	2. 13	308. 14	315. 32	14. 17	12. 41
28	W.	5	3. 8	322. 39	329. 33	10. 54	9. 0
29	Th.	6	3. 59	336. 15	342. 48	7. 0	4. 57
30	F.	7	4. 47	349. 10	355. 25	2. 52 S	0. 48 S
31	Sa.	8	5. 33	1. 34	7. 38	1. 16 N	3. 16 N

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid^{r}. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	Th.	15. 52	15. 44	58. 13	57. 46	4902	4936
2	F.	15. 37	15. 30	57. 20	56. 55	4968	5000
3	Sa.	15. 24	15. 18	56. 31	56. 9	5031	5059
4	*Su.*	15. 13	15. 8	55. 49	55. 31	5085	5108
5	M.	15. 3	14. 59	55. 14	55. 0	5130	5149
6	Tu.	14. 56	14. 53	54. 47	54. 36	5166	5181
7	W.	14. 50	14. 48	54. 27	54. 20	5193	5202
8	Th.	14. 47	14. 46	54. 14	54. 10	5210	5215
9	F.	14. 45	14. 44	54. 7	54. 5	5219	5222
10	Sa.	14. 44	14. 44	54. 4	54. 4	5223	5223
11	*Su.*	14. 45	14. 45	54. 6	54. 9	5221	5217
12	M.	14. 47	14. 48	54. 14	54. 20	5210	5202
13	Tu.	14. 50	14. 53	54. 27	54. 36	5193	5181
14	W.	14. 56	14. 59	54. 47	54. 59	5166	5150
15	Th.	15. 3	15. 7	55. 13	55. 29	5132	5111
16	F.	15. 12	15. 17	55. 47	56. 7	5087	5062
17	Sa.	15. 23	15. 30	56. 29	56. 52	5033	5004
18	*Su.*	15. 36	15. 43	57. 16	57. 42	4973	4941
19	M.	15. 51	15. 58	58. 9	58. 36	4907	4874
20	Tu.	16. 6	16. 13	59. 4	59. 31	4839	4806
21	W.	16. 20	16. 27	59. 57	60. 21	4775	4746
22	Th.	16. 32	16. 37	60. 42	61. 0	4721	4699
23	F.	16. 41	16. 44	61. 15	61. 25	4682	4670
24	Sa.	16. 45	16. 46	61. 30	61. 31	4664	4663
25	*Su.*	16. 45	16. 42	61. 27	61. 17	4668	4679
26	M.	16. 38	16. 33	61. 3	60. 45	4696	4717
27	Tu.	16. 27	16. 20	60. 23	59. 58	4743	4773
28	W.	16. 13	16. 5	59. 31	59. 3	4806	4841
29	Th.	15. 58	15. 50	58. 34	58. 5	4876	4912
30	F.	15. 42	15. 34	57. 36	57. 7	4949	4985
31	Sa.	15. 27	15. 20	56. 40	56. 15	5019	5051

Diſtances of ☽'s Center from Sun, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S	D. M. S.	D. M. S.	D. M.S.
1	α Arietis.	67. 55. 3	66. 16. 8	64. 37. 39	62.59.38	61. 22. 4	59. 44. 58	58. 8. 21	56.32.11
2		54. 56. 31	53. 21. 20	51. 46. 38	50.12.26	48. 38. 45	47. 5. 35	45. 32. 56	44. 0.50
3		42. 29. 15							
3	Aldebaran.	74. 17. 7	72. 41. 21	71. 5. 53	69.30.43	67. 55. 51	66. 21. 16	64. 46. 57	63.12.53
4		61. 39. 6	60. 5. 32	58. 32. 15	56.59.10	55. 26. 19	53. 53. 42	52. 21. 16	50.49. 3
5		49. 17. 2	47. 45. 13	46. 13. 33	44.42. 5	43. 10. 47	41. 39. 39	40. 8. 40	38.37.51
6		37. 7. 10	35. 36. 38	34. 6. 13	32.35.56	31. 5. 47	29. 35. 45	28. 5. 50	26.36. 1
7		25. 6. 19	23. 36. 44	22. 7. 14	20.37.50	19. 8. 32			
7	Pollux..					63. 9. 8	61. 42. 5	60. 15. 10	58.48.22
8		57. 21. 41	55. 55. 9	54. 28. 46	53. 2.31	51. 36. 26	50. 10. 30	48. 44. 45	47.19.10
9		45. 53. 46	44. 28. 35	43. 3. 36	41.38.50	40. 14. 17			
9	Regulus.					75. 25. 8	73. 56. 34	72. 28. 0	70.59.26
10		69. 30. 53	68. 2. 20	66. 33. 47	65. 5.14	63. 36. 41	62. 8. 8	60. 39. 34	59.10.59
11		57. 42. 23	56. 13. 46	54. 45. 8	53.16.28	51. 47. 47	50. 19. 5	48. 50. 21	47.21.34
12		45. 52. 46	44. 23. 55	42. 55. 2	41.26. 6	39. 57. 8	38. 28. 8	36. 59. 6	35.30. 2
13		34. 0. 55	32. 31. 45	31. 2. 32	29.33.18	28. 4. 3	26. 34. 47	25. 5. 32	23.36.14
14		22. 6. 58							
14	Spica ♍	75. 27. 10	73. 56. 33	72. 25. 47	70.54.53	69. 23. 51	67. 52. 40	66. 21. 18	64.49.46
15		63. 18. 5	61. 46. 13	60. 14. 9	58.41.53	57. 9. 26	55. 36. 47	54. 3. 54	52.30.48

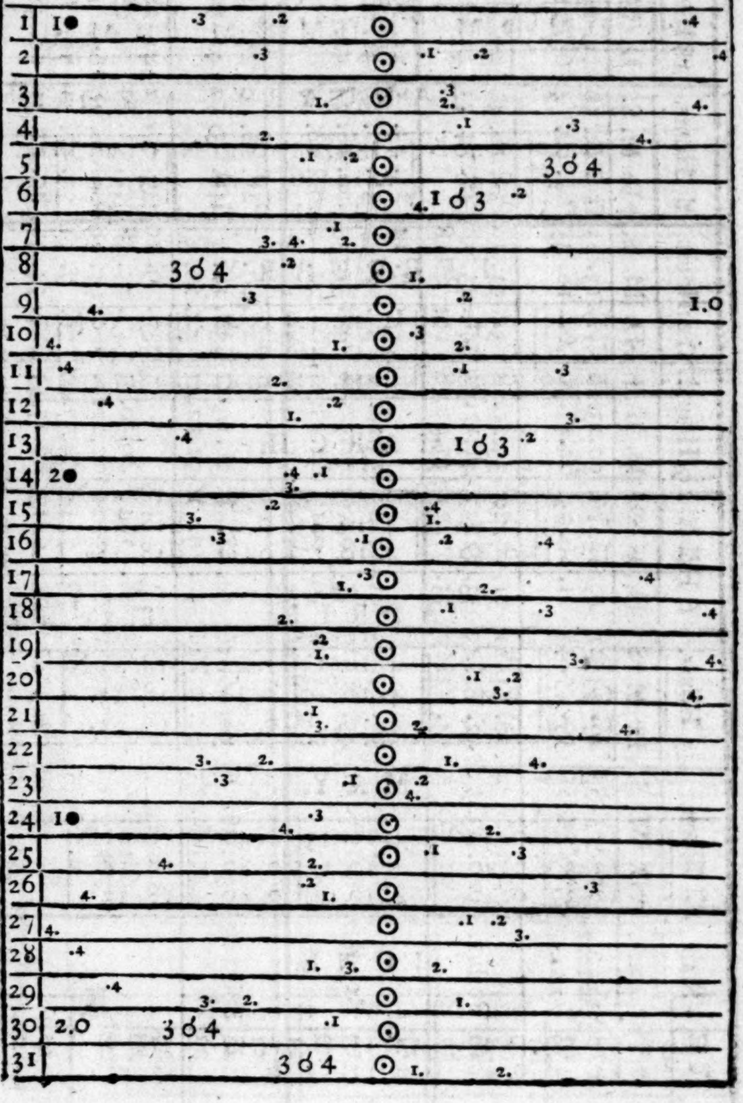
Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
16	Spica ♍	50. 57. 30	49. 23. 57	47. 50. 10	46. 16. 8	44. 41. 51	43. 7. 18	41. 32. 30	39. 57. 26
17		38. 22. 6	36. 46. 29	35. 10. 35	33. 34. 24	31. 57. 57	30. 21. 13	28. 44. 11	27. 6. 50
18		25. 29. 12							
15	The Sun.					120. 16. 22	118. 51. 35	117. 26. 33	116. 1. 18
16		114. 35. 49	113. 10. 5	111. 44. 6	110. 17. 50	108. 51. 19	107. 24. 31	105. 57. 26	104. 30. 2
17		103. 2. 21	101. 34. 23	100. 6. 5	98. 37. 28	97. 8. 32	95. 39. 15	94. 9. 38	92. 39. 40
18		91. 9. 21	89. 38. 42	88. 7. 40	86. 36. 16	85. 4. 30	83. 32. 20	81. 59. 46	80. 26. 49
19		78. 53. 28	77. 19. 44	75. 45. 36	74. 11. 4	72. 36. 8	71. 0. 47	69. 25. 0	67. 48. 49
20		66. 12. 14	64. 35. 13	62. 57. 48	61. 19. 59	59. 41. 46	58. 3. 9	56. 24. 8	54. 44. 45
21		53. 4. 58	51. 24. 48	49. 44. 15	48. 3. 22	46. 22. 8	44. 40. 34	42. 58. 42	41. 16. 31
22		39. 34. 3							
26	α Pegasi.	58. 45. 26	57. 0. 24	55. 15. 55	53. 32. 3	51. 48. 51	50. 6. 25	48. 24. 47	46. 44. 2
27		45. 4. 14	43. 25. 27	41. 47. 45	40. 11. 13	38. 35. 53			
27	α Arietis.					79. 56. 36	78. 10. 47	76. 25. 26	74. 40. 33
28		72. 56. 8	71. 12. 13	69. 28. 47	67. 45. 51	66. 3. 26	64. 21. 33	62. 40. 12	60. 59. 23
29		59. 19. 6	57. 39. 23	56. 0. 13	54. 21. 38	52. 43. 37	51. 6. 12	49. 29. 24	47. 53. 12
30		46. 17. 38							
30	Aldebaran.	78. 11. 3	76. 31. 42	74. 52. 45	73. 14. 14	71. 36. 8	69. 58. 27	68. 21. 8	66. 44. 12
31		65. 7. 40	63. 31. 30	61. 55. 41	60. 20. 13	58. 45. 7	57. 10. 21	55. 35. 54	54. 1. 46
J. 1		52. 27. 57							

Diſtances of ☽'s Center from Sun, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	The Sun.	77. 16. 10	78. 49. 47	80. 23. 1	81. 55. 52	83. 28. 20	85. 0. 25	86. 32. 7	88. 3. 27
2		89. 34. 24	91. 4. 58	92. 35. 11	94. 5. 2	95. 34. 32	97. 3. 41	98. 32. 30	100. 1. 0
3		101. 29. 10	102. 57. 2	104. 24. 36	105. 51. 52	107. 18. 50	108. 45. 31	110. 11. 56	111. 38. 4
4		113. 3. 56	114. 29. 33	115. 54. 55	117. 20. 3	118. 44. 56	120. 9. 36		
2	Antares.	93. 15. 3	94. 52. 22	96. 29. 20	98. 5. 55	99. 42. 10	101. 18. 3	102. 53. 37	104. 28. 49
3		106. 3. 41							
3	α Aquilæ.	58. 16. 36	59. 40. 31	61. 4. 29	62. 28. 30	63. 52. 35	65. 16. 42	66. 40. 48	68. 4. 54
4		69. 28. 58	70. 53. 1	72. 17. 0	73. 40. 55	75. 4. 48	76. 28. 36	77. 52. 19	79. 15. 55
5		80. 39. 27							
5	Fomal-haut.	50. 3. 33	51. 21. 22	52. 39. 30	53. 57. 59	55. 16. 49	56. 35. 57	57. 55. 18	59. 14. 53
6		60. 34. 43	61. 54. 43	63. 14. 51	64. 35. 8	65. 55. 35	67. 16. 8	68. 36. 46	69. 57. 30
7		71. 18. 20	72. 39. 14	74. 0. 11	75. 21. 11	76. 42. 14	78. 3. 19	79. 24. 25	80. 45. 32
8		82. 6. 40	83. 27. 50	84. 48. 58	86. 10. 7	87. 31. 15	88. 52. 22	90. 13. 27	91. 34. 30
9		92. 55. 31							
9	α Arietis.	33. 51. 56	35. 14. 41	36. 37. 46	38. 1. 11	39. 24. 56	40. 49. 0	42. 13. 17	43. 37. 49
10		45. 2. 37	46. 27. 35	47. 52. 43	49. 18. 1	50. 43. 30	52. 9. 8	53. 34. 54	55. 0. 47
11		56. 26. 47							
11	Aldeba-ran.	22. 26. 38	23. 55. 25	25. 24. 13	26. 53. 5	28. 21. 58	29. 50. 55	31. 19. 55	32. 48. 58
12		34. 18. 5	35. 47. 17	37. 16. 32	38. 45. 52	40. 15. 15	41. 44. 42	43. 14. 14	44. 43. 51

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.	D. M. S.
13	Aldebaran.	46. 13. 33	47. 43. 21	49. 13. 16	50. 43. 16	52. 13. 23	53. 43. 36	55. 13. 56	56. 44. 24
14		58. 14. 59	59. 45. 43	61. 16. 35	62. 47. 36	64. 18. 45	65. 50. 4	67. 21. 33	68. 53. 12
15		70. 25. 1							
15	Pollux.	29. 10. 4	30. 34. 21	31. 59. 20	33. 25. 4	34. 51. 30	36. 18. 36	37. 46. 17	39. 14. 34
16		40. 43. 25	42. 12. 45	43. 42. 33	45. 12. 52	46. 43. 38	48. 14. 51	49. 46. 29	51. 18. 34
17		52. 51. 5	54. 24. 2	55. 57. 23	57. 31. 8	59. 5. 18			
17	Regulus.					22. 7. 14	23. 43. 5	25. 19. 24	26. 56. 12
18		28. 33. 28	30. 11. 13	31. 49. 23	33. 28. 2	35. 7. 7	36. 46. 39	38. 26. 36	40. 7. 1
19		41. 47. 51	43. 29. 7	45. 10. 50	46. 52. 58	48. 35. 33	50. 18. 34	52. 2. 2	53. 45. 56
20		55. 30. 16	57. 15. 4	59. 0. 17	60. 45. 57	62. 32. 2	64. 18. 33	66. 5. 29	67. 52. 50
21		69. 40. 35	71. 28. 46	73. 17. 20	75. 6. 19	76. 55. 42			
21	Spica ♍					23. 27. 3	25. 16. 9	27. 5. 41	28. 55. 40
22		30. 46. 6	32. 36. 56	34. 28. 8	36. 19. 42	38. 11. 37	40. 3. 52	41. 56. 21	43. 49. 8
23		45. 42. 13	47. 35. 31	49. 29. 1	51. 22. 41	53. 16. 33			
27	The Sun.					38. 9. 20	39. 49. 2	41. 28. 20	43. 7. 16
28		44. 45. 49	46. 23. 59	48. 1. 43	49. 39. 3	51. 15. 58	52. 52. 27	54. 28. 30	56. 4. 7
29		57. 39. 18	59. 14. 2	60. 48. 21	62. 22. 13	63. 55. 39	65. 28. 39	67. 1. 13	68. 33. 22
30		70. 5. 5	71. 36. 23	73. 7. 17	74. 37. 46	76. 7. 51	77. 37. 31	79. 6. 48	80. 35. 42
31		82. 4. 14	83. 32. 24	85. 0. 13	86. 27. 41	87. 54. 48	89. 21. 35	90. 48. 3	92. 14. 12
J. 1		93. 40. 2							

Configurations of the SATELLITES of JUPITER at Seven o' Clock in the Morning.



GEORGIAN PLANET 1791.

Days.	Heliocentric		Geocentric		Decl.	Paſſ. Mer.
	Long.	Lat.	Long.	Lat.		
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
JANUARY. ☍ 31^{d}. 13^{h}.						
1	4. 11. 50	0. 40 N	4. 13. 28	0. 41 N	17. 27 N	14. 14
11	4. 11. 58	0. 40	4. 13. 6	0. 42	17. 34	13. 28
21	4. 12. 5	0. 40	4. 12. 41	0. 42	17. 41	12. 44
FEBRUARY.						
1	4. 12. 14	0. 40 N	4. 12. 12	0. 42 N	17. 50 N	11. 57
11	4. 12. 22	0. 40	4. 11. 46	0. 42	17. 57	11. 15
21	4. 12. 29	0. 40	4. 11. 21	0. 42	18. 4	10. 35
MARCH.						
1	4. 12. 35	0. 40 N	4. 11. 3	0. 42 N	18. 9 N	10. 4
11	4. 12. 43	0. 40	4. 10. 43	0. 42	18. 14	9. 26
21	4. 12. 51	0. 40	4. 10. 27	0. 41	18. 18	8. 48
APRIL. □ 30^{d}. 4$^{h}\frac{1}{2}$.						
1	4. 12. 59	0. 40 N	4. 10. 15	0. 41 N	18. 21 N	8. 7
11	4. 13. 7	0. 40	4. 10. 9	0. 41	18. 23	7. 30
21	4. 13. 14	0. 40	4. 10. 8	0. 41	18. 23	6. 53
MAY.						
1	4. 13. 22	0. 40 N	4. 10. 13	0. 40 N	18. 21 N	6. 16
11	4. 13. 30	0. 40	4. 10. 23	0. 40	18. 18	5. 38
21	4. 13. 37	0. 40	4. 10. 39	0. 40	18. 13	5. 0
JUNE.						
1	4. 13. 46	0. 40 N	4. 11. 1	0. 39 N	18. 7 N	4. 17
11	4. 13. 53	0. 40	4. 11. 26	0. 39	18. 0	3. 38
21	4. 14. 1	0. 40	4. 11. 54	0. 39	17. 52	2. 58

GEORGIAN PLANET 1791.

Days.	Heliocentric Long.	Heliocentric Lat.	Geocentric Long.	Geocentric Lat.	Decl.	Paſſ. Mer.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
JULY.						
1	4. 14. 9	0. 41 N	4. 12. 25	0. 39 N	17. 43 N	2. 19
11	4. 14. 17	0. 41	4. 12. 59	0. 39	17. 33	1. 40
21	4. 14. 24	0. 41	4. 13. 35	0. 39	17. 22	1. 2
AUGUST. ☌ 6^{d}. 19^{h}.						
1	4. 14. 33	0. 41 N	4. 14. 15	0. 39 N	17. 11 N	0. 22
11	4. 14. 40	0. 41	4. 14. 53	0. 39	17. 0	23. 42
21	4. 14. 48	0. 41	4. 15. 30	0. 39	16. 49	23. 8
SEPTEMBER.						
1	4. 14. 56	0. 41 N	4. 16. 10	0. 39 N	16. 38 N	22. 30
11	4. 15. 4	0. 41	4. 16. 44	0. 39	16. 28	21. 56
21	4. 15. 12	0. 41	4. 17. 15	0. 39	16. 19	21. 22
OCTOBER.						
1	4. 15. 19	0. 41 N	4. 17. 44	0. 40 N	16. 10 N	20. 48
11	4. 15. 27	0. 41	4. 18. 9	0. 40	16. 2	20. 13
21	4. 15. 35	0. 41	4. 18. 30	0. 40	15. 56	19. 37
NOVEMBER. □ 10^{d}. $20^{h}\frac{1}{2}$.						
1	4. 15. 43	0. 41 N	4. 18. 47	0. 41 N	15. 52 N	18. 56
11	4. 15. 51	0. 41	4. 18. 56	0. 41	15. 49	18. 17
21	4. 15. 59	0. 41	4. 19. 1	0. 42	15. 48	17. 36
DECEMBER.						
1	4. 16. 6	0. 41 N	4. 19. 0	0. 42 N	15. 49 N	16. 53
11	4. 16. 14	0. 41	4. 18. 53	0. 42	15. 51	16. 9
21	4. 16. 22	0. 41	4. 18. 41	0. 43	15. 55	15. 24
31	4. 16. 29	0. 41	4. 18. 24	0. 43	16. 1	14. 39

Advertiſement of the expected Return of the COMET *of* 1532 *and* 1661 *in the Year* 1788.

By the ASTRONOMER ROYAL.

THE Elements of the Orbits of the Comets obſerved by *Apian* in 1532, and by *Hevelius* in 1661, are ſo much alike as to have induced Dr. *Halley* to ſuppoſe them to be one and the ſame Comet, and Aſtronomers ſince have joined in the ſame opinion. Hence it ſhould return to its perihelium the 27th day of *April* 1789. But from the diſturbances of the Planets it will probably come a few months ſooner. It will firſt be ſeen in the ſouthern parts of the heavens, if any Aſtronomers ſhall watch for it in ſituations nearer the Line, or in ſouthern climates, in the courſe of the year 1788, and probably not before the month of *September*. Aſtronomers, who may happen to be in thoſe parts, will be enabled to direct their teleſcopes for diſcovering it as early as poſſible by being furniſhed with the following elements of its orbit:

The Perihelium diſtance - - - - -	0,44851
Place of aſcending Node - - - -	2°. 24°. 18′
Inclination of the orbit to the Ecliptic	32°. 36′
Perihelium forwarder in the orbit than the aſcending Node - - - - -	33°. 28′

Time of the Perihelium in the latter end of the year 1788, or the beginning of 1789.

Its motion is direct.

If it ſhould come to its Perihelium on *January* 1ſt 1789, it might be firſt ſeen in the ſouthern parts of the world with a good Achromatic Teleſcope about the middle of *September* towards the middle of Piſces with 55° South Latitude and 53° South declination.

Advertiſement relative to the Diſappearances and Re-appearances of SATURN'S RING *in* 1789, *and* 1790.

By the ASTRONOMER ROYAL.

ON *May* 3d and *Auguſt* 26th 1789 the plane of Saturn's Ring will paſs through the earth; on *October* 11th it will paſs through the ſun; and on *January* 29th 1790 it will again paſs through the earth. Hence, and ſuppoſing with M. *De la Lande*, that the Ring is but juſt viſible with the beſt teleſcopes in common uſe, when the ſun is elevated 3′ above its plane, or 3 days before the plane paſſes through the ſun, and when the earth is elevated 2′½ above the plane, or one day from the earth's paſſing it, the phænomena of Diſappearance and Re-appearance may be expected to take place as follows;

May 2d 1789 Saturn's Ring will diſappear, the earth being about to paſs from its northern ſide, which is enlightened, to its ſouthern ſide, which is obſcure.

Auguſt 27th, the earth having repaſſed to the northern or enlightened ſide, the Ring will re-appear.

October 8th the Ring will diſappear, its plane being near paſſing through the ſun; when it will change its enlightened ſide from the northern to the ſouthern one; conſequently the dark ſide will be then turned to the earth.

January

January 30th 1790, the earth having paſſed from the northern or dark ſide of the Ring to the ſouthern or enlightened one, the Ring will become viſible, to continue ſo till the year 1803.

If the ſouthern ſide of the Ring reflects light better than the northern one, as M. *du Sejour* conjectures, the three firſt phænomena, happening at the northern ſide of the Ring, may be obſerved with more preciſion than the laſt, which happens at the ſouthern ſide.

The phænomena may happen five days ſooner or later than here ſet down, if the tables ſhould err 10′ in giving the geocentric longitude of Saturn. Obſervers would do well to look out at leaſt ten days ſooner than here ſet down for the firſt and third of theſe phænomena; and at leaſt five days ſooner than is here ſet down for the ſecond and fourth, as well on account of the uncertainty of the errors of the tables of Saturn, as of the poſitions of the Ring and of Saturn's Node aſſumed in the calculations, and the ſuppoſitions above made reſpecting the leaſt elevations of the ſun and earth above the plane of the ring to render it viſible.

The calculations were made by aſſuming the place of the deſcending Node of the Ring with the plane of the Ecliptic in 11ˢ.17°.18′, being the ſame with that found by M. *De la Lande* in 1774, only allowing for the preceſſion of the equinoxes. The place of Saturn's aſcending Node was taken in 3ˢ.21°.51′, and the inclination of his orbit to the Ecliptic 2°. 30′. 20″, both according to M. *De la Lande's* tables, and the inclination of the Ring to the Ecliptic

31°. 20′,

$31^{\circ}. 20'$, and the place of the aſcending Node of the Ring with the plane of Saturn's orbit, as correſponding with the above data, in $5^{s}. 20^{\circ}. 52'$.

As this paſſage of Saturn by the deſcending Node of the Ring is favorable for determining its poſition, and the great improvement of teleſcopes at preſent affords Aſtronomers great advantages in making curious and preciſe obſervations on the appearances and re-appearances of the Ring, it is hoped they will be attentive to theſe phænomena.

THE END.

ERRATA in the *Nautical Almanac* of 1788.

Page	Day	
30	3	Col. 7, *for* 13. 56 *read* 18. 56
76		Laſt Column of Saturn, *for* 4 *read* 16
		3 —— 15
		3 —— 15
		2 —— 14
		2 —— 14
84		*For* p. 88 *read* p. 84

ERRATA in the *New* REQUISITE TABLES.

Tab. VII. p. 7, l. 6, *for* preceding *read* following.

Tab. VIII. p. 14, ☽'s Par. 54'.50'' Alt. 61° *for* 25'.3'' *read* 26'.3''

Tab. IX. p. 19, ——— 53'.10 — 12° *for* 879.2 *read* 879.8
p. 23, ——— 57'.40 — 38° *for* 568.6 *read* 569.6
57'.50 — 38° *for* 567.3 *read* 568.3
p. 26, ——— 53'. 0 — 55° *for* 471.5 *read* 470.5
58'.20 — 52° *for* 436.2 *read* 437.2
58'.30 — 52° *for* 434.5 *read* 435.5
58'.40 — 52° *for* 432.8 *read* 433.8
58'.50 — 52° *for* 431.1 *read* 432.1
p. 27, ——— 56'.50 — 59° *for* 422.8 *read* 402.8
p. 28, ——— 57'.20 — 65° *for* 362.7 *read* 361.7
62'. 0 — 64° *for* 314.1 *read* 313.1

Tab. XVI. p. 60, at 0^{h}.44'.40'' Mid. Time *for* 58008 *read* 58808
p. 61, at 1^{h}.11'. 0 Log. riſing *for* 67756 *read* 67765
p. 62, at 1^{h}.23'.30 Mid. Time *for* 85388 *read* 85288
p. 67, at 3^{h}. 4'.50 Log. riſing *for* 48550 *read* 48850
p. 79, at 8^{h}.17'.30 Log. riſing *for* 19430 *read* 19440
.40 ——— *for* 19466 *read* 19456
.50 ——— *for* 19483 *read* 19473

Tab. XVII. p. 86, Nat. Sine 20°.59', *for* 45810 *read* 35810
p. 90, at 45° inſert Nat. Sine 70711

Tab. XVIII. p. 100, in the Title *for* XVI. *read* XVIII.

Tab. XIX. p. 112, 4°.58' & 59' Dif. of Log. Sines *for* 2429 *r.* 2419

Tab. XX. Agen, Long. in Time *for* 3'.23'' *read* 2'.23''
Aſcenſion, *for* Long. 14°.22'.31'' *read* 14°.21'.15''
Autun, Long. in Time, *for* 17'.14'' *read* 17'.13''
Bourges, Long. in Time, *for* 9'.14'' *read* 9'.34''
Bridge Town, *for* 58°.35'.0'' *read* 59°.41'.15'', and
for 3^{h}.54'.20'' *read* 3^{h}.58'.45''
Burgeo Iſles, *for* 3^{h}.50'.24'' *read* 3^{h}.50'.26''
Cairo, Longitude, *for* 31°.18'.16'' *read* 31°.27'.15''
St. Catherine's, Lon. in Time *for* 3^{h}.17'.30'' *r.* 3^{h}.17'.8''
Chandernagor, *for* 5^{h}.53'.27'' *read* 5^{h}.53'.57''
Edyſtone, *for* 0^{h}.17'.24'' *read* 0^{h}.17'.36''
Evout's Iſles, Long. *for* 66°.39' *read* 66°.59'

Norfolk Isle, for N. Lat. r. S.

Errata in the New Requiſite Tables.

Tab. XX. Furneaux's Iſland, *for* $9^{h}.28'.27''$ *read* $9^{h}.32'.27''$
Gilbert's Iſles, Lon. in Time *for* $4^{h}.44'.11''$ *r.* $4^{h}.44'.27''$
Cape Henlopen, *for* 75°.4′.15″ *read* 75°.13′.17″, and
for $5^{h}.0'.15''$ *read* $5^{h}.0'.53''$
St. Ildefonſo's Iſles, Long. *for* 69°.21′ *read* 69°.28′.
Cape Noir, Long. in Time *for* $4^{h}.48'.13''$ *r.* $4^{h}.52'.13''$
Cape Palliſer, *for* 175°.18′ *read* 175°.23′.12″, and
for $11^{h}.44'.30''$ *read* $11^{h}.41'.33''$
Port Paix, Long. in Time *for* $4^{h}.48'.8''$ *read* $4^{h}.52'.8''$
Schwezingen, *for* $0^{h}.34'.23''$ *read* $0^{h}.34'.43''$
Smyrna, Long. *for* 27°.19′.45″ *read* 27°.18′.45″
Tobolſki, Long. in Time *for* $4^{h}.38'.51''$ *r.* $4^{h}.32'.51''$
Tolaga Bay, *for* $11^{h}.58'.15''$ *read* $11^{h}.54'.15''$
Tonnerre, *for* $0^{h}.15'.59''$ *read* $0^{h}.15'.55''$
Valenciennes, *for* $0^{h}.14'.18''$ *read* $0^{h}.14'.7''$
Vannes, *for* $0^{h}.11'.17''$ *read* $0^{h}.11'.6''$.

Tab. XXII. p. 169, Long. Ship 105°, Var. ☽'s Declin. 2°, *for* 1°.0′ *read* 1°.10′

Precepts, p. 7, Ex. III. and IV. *for* Tab. II. *read* Tab. VI.
Ex. IV. *for* $18^{h}.40'$ *read* $18^{h}.30'$
for 19°.18′.25″ *read* 19°.27′.56″
for — 3′.0″ *read* + 3′.0″
for 19°.20′.22″ *read* 19°.35′.53″
p. 19, l. 4 from the bottom, *for* 12° *read* 12^{h}
p. 26, l. 8, *for* 79°.34′ *read* 67°.48′
p. 27, l. 19, 21 and 32, *for* $1^{h}.31'$ *read* $1^{h}.33'$
p. 30, l. 16, *for* 11.6277 *read* 12.2140
p. 40, l. 4 from the bottom *dele* Half paſt.

The Obſervations, which Ex. III. p. 30 and 35, were taken from, muſt have been erroneous, ſince the Numbers will not conſiſt in a ſpherical Triangle. Alſo Ex. IV. p. 31 and 36, is in the ſame Situation, owing to a Miſtake in tranſcribing the Moon's Altitude 71°.6′.2″, inſtead of 41°.6′.2″. But the Rules on p. 28 and 32, having been exactly followed in the Calculations, no Perſon can be puzzled or miſled by theſe Miſtakes. However, to avoid Cavils, let the Moon's Altitude in Ex. III. p. 30 and 35, be taken 84°.46′, inſtead of 88°.46′, the other Data, as they ſtand in the Example, and the true Diſtance will come out 90°.2′.31″, both by Lyons' and Dunthorne's improved Methods. Alſo, if the Moon's Altitude be taken 41°.6′.2″ in Ex. IV. p. 31 & 36, the true Diſtance will come out 103°.3′.19″ by Lyons' Method, and 103°.3′.18″ by Dunthorne's.

EXPLANATION and USE
OF THE
ARTICLES
CONTAINED IN THE
ASTRONOMICAL and NAUTICAL EPHEMERIS.

IT may be proper firſt to premiſe, that all the Calculations of the *Ephemeris* are made according to apparent Time by the Meridian of the *Royal Obſervatory* at *Greenwich*: And the Sun's, Planet's, and Moon's Places, with the Particulars depending on them in the IId, IVth, Vth, VIth, and VIIth Pages of each Month, are computed to the Inſtant of apparent Noon, or that of the Sun's Center paſſing the Meridian of *Greenwich*.

Apparent Time, at any Place, is that deduced immediately from the Sun, whether from the Obſervation of his paſſing the Meridian, from his Altitude obſerved at a Diſtance from the Meridian, or from his obſerved Riſing or Setting. This Time is different from that ſhewn by Clocks and Watches well regulated at Land, which is called equated or mean Time. This will be explained when we come to treat of the Equation of Time.

The Day is here ſuppoſed, according to the Method of Aſtronomers, to begin at Noon, or 12 Hours later than the civil Day of the ſame Denomination, and to be counted up to 24 Hours or the ſucceeding Noon, when the next Day begins. Thus the Day of the Month and the Hour of the Day are the ſame in this Method as in the civil Account at Noon, and from Noon till Midnight; but from Midnight till Noon they differ; for whereas in the civil Account a freſh Day is ſuppoſed to begin at Midnight, and the Hours to begin over again, in this Method the Day is ſtill continued beyond Midnight, and the Reckoning of the Hours is continued up to 24. Thus the Diſtances put down to January 10, 15 Hours belong to January 11 at Three in the Morning by civil Reckoning.

There are XII Pages for every Month. The firſt Column of the firſt Page of each Month contains the Day of the Month; the ſecond, the Day of the Week expreſſed conciſely by the initial Letter or Letters, *Su.* ſtanding for Sunday, M. for Monday, Tu. for Tueſday, W. for Wedneſday, Th. for Thurſday, F. for Friday, and Sa. for Saturday: The third Column exhibits the Sundays and Feſtivals of the Church of England, and other remarkable Days: The laſt Column ſhews at Top the Moon's Phaſes, or the Times of New and Full Moon, and of the firſt and laſt Quarter or two Quadratures with the Sun: Beneath are contained miſcellaneous Phænomena, namely, Eclipſes of the Sun and Moon, and Occultations of Planets or fixt Stars not leſs than the fourth Magnitude, by the Moon, as they ſhould happen at *Greenwich* by the Tables; the Conjunctions of the Moon with all Stars not leſs than the fourth Magnitude, which can be Occultations any where on the Globe, between the Latitudes of 60° North and 40° South: The Entrance of the Sun into the ſeveral Signs, and any other remarkable Phænomena.

The Stars are expreſſed by *Bayer*'s Characters of Reference. The Conjunction of the Moon or a Planet with a Star is denoted by prefixing the Character of the Moon or Planet to that of the Star, the Time of the Conjunction being placed immediately after. The Caſe is the ſame with reſpect to the Occultation of a Star or Planet by the Moon, only this is further diſtinguiſhed by the Addition of Im. or Immerſion, to ſignify the Diſappearance behind the Moon; and Em. or Emerſion to ſignify the Re-appearance of the ſame. Thus 8^{d}. ☽ ϑ ♑ 16^{h}. 22′, ſignifies that the Moon will be in Conjunction with the Star ϑ ♑ on the Eighth Day at 16^{h}. 22′, excluſive of Parallax: And 10^{d}. ☽ ε ♊ Im. 9^{h}. 14′. Em. 10^{h}. 23′ ſignifies that the Moon will eclipſe ε ♊ on the 10th Day, the Immerſion being at 9^{h}. 14′, and the Emerſion at 10^{h}. 23′, apparent Time at *Greenwich*.

The Occultations ſet down are thoſe only viſible at *Greenwich*; the Circumſtances of which will commonly not differ very widely in moſt Parts of the Kingdom; but in very diſtant Places they will differ very much, owing to the Change of the Moon's Parallax, or it may become no Occultation at all: The like may be ſaid of Eclipſes of the Sun.

An Eclipſe of the Sun, or Occultation of a fixt Star by the Moon, if obſerved in a Place whoſe Latitude and Longitude are well determined, may be applied to the Correction of the Lunar Tables; but if made in a Place whoſe Latitude only is well known, may be applied to the Determination of the Longitude of the Place; but for this Purpoſe an accurate Calculation muſt be made of the Moon's Parallaxes in Longitude and Latitude, which makes this Method of ſettling the Longitudes of Places, though a very accurate one, leſs convenient in uſe for Perſons not much verſed in aſtronomical Calculations. However, this ought not to diſcourage Travellers or Mariners from endeavouring to make theſe Obſervations as often and as carefully as poſſible, when they ſhall happen to be at any Place whoſe Longitude they have Reaſon to think has not been well ſettled; ſince the neceſſary Calculations may be made at any Time afterwards by themſelves, at Leiſure, or referred to the Skill of Aſtronomers and Mathematicians.

Eclipſes of the Moon are not liable to this Inconvenience; the Longitude of any Place, where the Eclipſe has been obſerved, being deduced immediately by taking the Difference of the Time of the Obſervation and that ſet down in the *Ephemeris*, and converting it into Degrees, at the Rate of 15° to one Hour, *&c.* or more briefly by Table XIV. page 38 of the 2d Edition of the Tables requiſite to be uſed with the *Ephemeris*. But, as the Beginning or Ending of an Eclipſe of the Moon cannot be generally obſerved nearer than One Minute, and ſometimes Two or Three Minutes of Time, the Longitudes of Places cannot be certainly determined by this Method from a ſingle Obſervation of the Beginning or End nearer than a Degree. Even this Point of Exactneſs will often be of great Service. If both the Beginning and End of the Eclipſe be obſerved, a greater Degree of Exactneſs will be attained.

The Conjunctions of the Moon with the Planets, or fixt Stars not leſs than the fourth Magnitude, which may prove Occultations in ſome inhabited Parts of the Globe, are evidently deſigned to inſtruct Mariners or Travellers to look out frequently for ſuch Obſervations; which if they happen to prove Occultations, and are carefully obſerved, will afford a certain Means of determining the Longitude of the Place of Obſervation.

The Two firſt Columns of the Second Page of the Month contain the Day of the Month and Week as before; next follow the Sun's Longitude, right Aſcenſion in Time, Declination, and the Equation of Time with its Difference from Day to Day.

The Longitude of the Sun is made uſe of in moſt of the ſucceeding Calculations of the *Ephemeris*, and may ſerve either to verify them, or to make other ſimilar Calculations at a different Time of the Day. Particularly it may ſerve, with the Help of the Moon's Longitude, to find the Diſtance of the Moon from the Sun at any Time, independent of the Diſtances contained in the VIIIth, IXth, Xth, and XIth Pages of the Month. To find the Sun's Longitude at any Time different from Noon, Proportion muſt be made according to its daily Increaſe: Saying, as 24^h. is to the Hour from Noon reckoned by the Meridian of *Greenwich*, ſo is the daily Variation of the Sun's Longitude, to a fourth Number; which added to the Sun's Longitude at the preceding Noon, gives the true Longitude at the given Time.

If the Time given be that of a Meridian different from *Greenwich*, it muſt be firſt reduced thereto, by adding or ſubſtracting the Difference of Longitude turned into Time (at the Rate of One Hour to 15°. and One Minute of Time to 15 Minutes, or more briefly by Table XIV. page 38 of the *Requiſite Tables*) according as the Place is to the Weſt or to the Eaſt of *Greenwich*. Example: Suppoſe any one ſhould want to know the Sun's Longitude, January 19, 1767, at 4^h. 35′, being in 21°. 15′, Longitude Eaſt of *Greenwich*. The Difference of Longitude turned into Time is 1^h. 25′, which ſubſtracted from 4^h. 35′, becauſe the Place is Eaſt of *Greenwich*, leaves 3^h. 10′, for the Time reduced to the Meridian of *Greenwich*. The Sun's Longitude the preceding

ceding Noon is 9^s. 29°. 18′. 2″, and the following Noon is 10^s. 0°. 19 . 4″. the Difference is, 1°. 1′. 2″, or 61′. 2″, the daily Variation. Then ſay, as 24^h. is to 3^h. 10′, ſo is 61′. 2″, to 8′. 3″, which added to 9^s. 29°. 18′. 2″, the Sun's Longitude on the preceding Noon, gives 9^s. 29°. 26′. 5″, the Sun's Longitude at the Time given. In like Manner any other of the following Articles is to be found by the Help of the *Ephemeris.*

The Sun's Longitude ſerves alſo to compute the Aberration of the fixt Stars and Planets

The Sun's right Aſcenſion in Time is uſeful to the practical Aſtronomer in regular Obſervatories, who adjuſts his Clocks by ſidereal Time. It is alſo uſeful to him for converting apparent into ſidereal Time; as ſuppoſe that of an Eclipſe of Jupiter's Satellites, in order to know at what Time it may be expected to happen by his Clocks: For this Purpoſe the Sun's right Aſcenſion at the preceding Noon, together with the Increaſe of right Aſcenſion from Noon, muſt be added to the apparent Time of the Phænomenon ſet down in the *Ephemeris.*

The Sun's right Aſcenſion in Time ſerves alſo to compute the apparent Time of a known Star's paſſing the Meridian: Thus, ſubſtract the Sun's right Aſcenſion in Time at Noon from the Star's right Aſcenſion in Time, the Remainder is the apparent Time of the Star's paſſing the Meridian nearly; from which the proportional Part of the daily Increaſe of the Sun's right Aſcenſion for this apparent Time from Noon being ſubſtracted, leaves the correct Time of the Star's paſſing the Meridian.

Hence the apparent Time may be found from an obſerved Altitude of a known fixt Star, ſuppoſe one contained in Page 7, of the *Requiſite Tables*; as will be explained hereafter.

The Sun's right Aſcenſion in Time is alſo uſeful for computing the Time of the Moon and Planets paſſing the Meridian, as will be ſhewn under their proper Articles.

The Sun's Declination is neceſſary to find the Latitude, whether at Sea or Land, from the Meridian Altitude obſerved; it is alſo requiſite for finding the Latitude from Two Altitudes obſerved with the Interval of Time meaſured by a Watch; it ſerves for computing the Sun's Azimuth, having his Altitude and the Latitude of the Place given, in order

to

to find the Variation of the Compaſs; it is required, jointly with the Latitude of the Place and the Sun's horary Angle, to compute his Altitude, if neglected to be obſerved at the Time of taking the Moon's Diſtance from the Sun for finding the Longitude, being uſeful to facilitate the Calculation of the Effect of Refraction and Parallax upon the Diſtance; it is alſo neceſſary to calculate the apparent Time from an obſerved Altitude of the Sun at a Diſtance from the Meridian, the Latitude being given; or to compute the Time of the Sun's Setting or Riſing; which, though a leſs accurate Method than the former of obtaining the Time, may yet be uſeful when that cannot be had. For any of theſe Purpoſes the Sun's Declination muſt be found to the Time given nearly reduced to the Meridian of *Greenwich*, making Proportion according to the daily Increaſe or Decreaſe, in like Manner as was ſhewn with reſpect to the Sun's Longitude.

The Equation of Time is a Correction, which added to or ſubſtracted from the apparent Time (according to its Title at the Top of the Column) gives equated or mean Time, or that which ſhould be ſhown by a good Clock or Watch. Apparent Time is that which takes its Beginning from the Paſſage of the Sun's Center over the Meridian of any Place; and had the Sun no Motion in the Ecliptic, or was his Motion reduced to the Equator or in right Aſcenſion uniform, he would always return to the Meridian after equal Intervals of Time. But his apparent Motion in the Ecliptic being continually varying, and his Motion in right Aſcenſion being rendered further unequal on account of the Obliquity of the Ecliptic to the Equator, from theſe Cauſes it ariſes that the Intervals of his Return to the Meridian become unequal, and the Sun will gradually come too ſlow or too ſoon to the Meridian for an equable Motion, ſuch as that of Clocks and Watches ought to be.

This Retardation or Acceleration of the Sun's coming to the Meridian is called the Equation of Time, and is contained in the laſt Column but One of Page II. and when applied according to its Title to the apparent Time, or that deduced immediately from the Sun, gives the mean or equated Time, whence the Error of a Clock or Watch may be found, and, if required, it may be corrected.

If

If it be propoſed to convert mean Time into apparent, this is done by a contrary Proceſs, by applying the Equation of Time to the mean Time given, with its Title or Sign changed; *viz.* ſubſtracting inſtead of adding, and adding inſtead of ſubſtracting.

The Equation of Time being ſet down in the *Ephemeris* for Noon at *Greenwich*, Proportion muſt be made, according to the daily Difference, to find what it ſhould be at any given Time reduced to the ſame Meridian, as in the preceding Articles. The laſt Column of this Page, containing the daily Differences of the Equation, is deſigned for this Purpoſe.

As often as it may be required to make any Calculations from aſtronomical Tables, and the Time given be apparent Time; it is neceſſary firſt to apply the Equation of Time thereto to convert it into mean Time, the Tables being diſpoſed according to mean Motions. Thus the Articles contained in the *Ephemeris* anſwering to Noon were computed to 0^h. increaſed, or 24 Hours of the preceding Day diminiſhed, by the Equation of Time: And the Moon's Places ſet down for Midnight were computed to 12^h. increaſed or diminiſhed by the Equation of Time.

What has been ſhewn concerning the Equation of Time chiefly reſpects the Aſtronomer, the Mariner having nothing to do with it in computing his Longitude from the Moon's Diſtances from the Sun and Stars obſerved at Sea with the Help of the *Ephemeris*, all the Calculations thereof being adapted to apparent Time, the ſame which he will obtain by the Altitudes of the Sun or Stars in the Manner hereafter preſcribed.

But if Time-keepers ſhould be brought into Uſe at Sea, the apparent Time deduced from an Altitude of the Sun muſt be corrected by the Equation of Time, and the mean Time found compared with that ſhewn by the Watch; the Difference will be the Longitude in Time from the Meridian by which the Watch was ſet, as near as the Going of the Watch can be depended upon.

The Equation of Time is computed in the Manner explained in my Remarks upon that Subject, in the *Philoſophical Tranſactions*, Vol. liv. Page 342, for the Year 1764; namely,

namely, by taking the Difference of the Sun's true right Aſcenſion, and his mean Longitude corrected by the Equation of the Equinoxes in right Aſcenſion, and turning it into Time at the Rate of 1'. to 15'. &c. The Equation of Time will be additive or ſubſtractive as the Sun's true right Aſcenſion is greater or leſs than his mean Longitude.

The Semidiameter of the Sun, Page III. is neceſſary to reduce the obſerved Altitude of his upper or lower Limb to that of the Center; alſo to reduce the obſerved Diſtance of the Moon's neareſt Limb from the Sun's neareſt Limb to the Diſtance of the Centers. It is alſo uſeful to Aſtronomers to verify or aſcertain the Exactneſs of the Scale of their Micrometers, by Compariſon with the Meaſure of the Sun's horizontal Diameter. This Practice is particularly uſeful in ſolar Eclipſes, when the Diſtance of the Cuſps or the Verſe Sine of the uneclipſed Part has been meaſured with the Micrometer. The Semidiameters of the Sun in *Mayer's* Tables, on which all the Calculations reſpecting the Sun and Moon are made, ſuppoſe the Semidiameter at the mean Diſtance to be 16'. 2'',8. which Mr. *Mayer* ſays he deduced from above 130 Obſervations taken with his Six Feet mural Quadrant, which ſeemed to him not ill adapted to the Purpoſe. It may not be amiſs to take this Opportunity to remark, that the Quadrant here mentioned was given to the *Univerſity* of *Gottingen* by his late Majeſty, and was made by that ingenious Artiſt the late Mr. *John Bird* after the Model of the Eight Feet mural Arch, which he finiſhed for the *Royal Obſervatory* at *Greenwich*, and put up there in the Year 1750. Mr. *Mayer* made his Obſervations with his Six Feet mural Arch, from the Year 1756, to the Time of his Deceaſe; with it he ſettled the mean Obliquity of the Ecliptic to the Beginning of the Year 1756, at 23°. 28'. 16'', which Dr. *Bradley* ſettled by his Obſervations, reduced to the Year 1750, at 23°. 28'. 18''. The Difference is agreeable to what ought to ariſe from the gradual Diminution of the Obliquity of the Ecliptic at the Rate of about $\frac{1}{2}$ a Second in a Year. The ſame Inſtrument he alſo uſed in ſettling the Elements of his ſolar Tables; and it is moſt probable that with the ſame he ſettled his Table of Refractions at the End of his ſolar Tables; the

Agreement of this Table with Dr. *Bradley's*, ſee Page 1ſt of *Requiſite Tables* (being both ſuited to the ſame Temperature of the Air) is ſo great, that they ſeem rather like One and the ſame than Two different Tables.

The Time of the Sun's Semidiameter paſſing the Meridian, ſerves to reduce an Obſervation of a Tranſit of the preceding or ſubſequent Limb over the Meridian to that of the Center, when only One was obſerved. It ſignifies a Portion of apparent Time, or even mean Time, the Difference being abſolutely inſenſible upon ſo ſmall an Interval. It is found thus: Increaſe the Sun's Semidiameter in the Ratio of the Coſine of his Declination to the Radius, to find his Semidiameter in right Aſcenſion, which turned into Time at the Rate of 1′ to 15ʹ. and 1″ to 15ʹʹ. gives the Time required. The Sun's Semidiameter in right Aſcenſion is readily found by adding the Log. Coſine of his Declination to the logiſtic Logarithm of his Semidiameter, the Sum is the logiſtic Logarithm of his Semidiameter in right Aſcenſion; which divided by 15 gives the Time of his Semidiameter paſſing the Meridian. If the Clock by which the Obſervation is made be regulated according to the ſidereal Time, this Quantity muſt be increaſed in the Ratio of 365 to 366, if great Preciſion is required.

From the Time of the Sun's Semidameter paſſing the Meridian may alſo be found the Time of its paſſing the horizontal or vertical Wire of a Quadrant or Sextant, which on ſome Occaſions may have its Uſe.—The hourly Motion of the Sun is uſeful in computing ſolar and lunar Eclipſes; alſo in correcting the aſſumed Longitude of the Ship, in order to find the Time from an Obſervation of the Diſtance of the Moon from the Sun, independent of the Diſtances contained in the *Nautical Ephemeris*; See *Britiſh Mariner's Guide*, Page 49, and Table at the End of the ſame, Page 25. The Logarithm of the Sun's Diſtance is uſeful in the Calculation of the Places of the Planets and Comets. The Place of the Moon's Node ſignifies its mean Longitude, and is neceſſary for finding the Equation of the equinoctial Points both in Longitude and right Aſcenſion, the Equation of the Obliquity of the Ecliptic, and the Deviations of the fixed Stars in right Aſcenſion and Declination.

The Eclipſes of Jupiter's Satellites are well known to afford the readieſt, and for general Practice the beſt Method of ſettling the Longitudes of Places at Land; and it is by their Means principally that Geography has been ſo much reformed within a Century paſt, and the Poſition of the moſt diſtant Places determined with equal Accuracy to the neareſt. It was hoped that ſome Means might be found of uſing proper Teleſcopes on Shipboard to obſerve theſe Eclipſes; and could this be effected, it would be of great Service in aſcertaining the Longitude of a Ship from time to time. In my Voyage to *Barbadoes* under the Direction of the COMMISSIONERS OF LONGITUDE, in 1763 I made a full Trial of the late Mr. *Irwin*'s Marine Chair propoſed for this Purpoſe, but could not derive any Advantage from the Uſe of it; and, conſidering the great Power requiſite in a Teleſcope for making theſe Obſervations well, and the Violence as well as Irregularities of the Motion of a Ship, I am afraid the complete Management of a Teleſcope on Shipboard will always remain among the Deſiderata. However, I would not be underſtood to mean to diſcourage any Attempt founded upon good Principles to get over this Difficulty.

The Teleſcopes proper for obſerving the Eclipſes of Jupiter's Satellites, are common refracting Teleſcopes from 15 to 20 Feet, reflecting Teleſcopes of 18 Inches or Two Feet focal Length, and Teleſcopes of Mr. *Dollond*'s Conſtruction with Two Object Glaſſes from 5 to 10 Feet; or, which are ſtill more convenient, thoſe of 46 Inches focal Length, conſtructed with Three Object Glaſſes, which are as manageable as reflecting Teleſcopes, and perform as much as thoſe which he makes of 10 Feet with Two Object Glaſſes.

The Eclipſes of Jupiter's Satellites are obſerved by Aſtronomers at Land, as well in order to provide Materials for improving the Theories and Tables of their Motions, as for the ſake of Compariſon with the correſponding Obſervations which may be made by Perſons in different Parts of the Globe, whereby the Longitude of ſuch Places will be accurately aſcertained. It is indeed to be lamented that Perſons, who viſit diſtant Countries, are not more diligent to multiply Obſervations of this Kind; for want of which, the Obſervations made by Aſtronomers in eſtabliſhed Obſervatories loſe Half their Uſe,

Uſe, and the Improvement of Geography is retarded. But it is to be hoped that an Emulation will ſpring up among thoſe who may have Opportunities of rendering ſo uſeful a Service to the Public, to incite them to watch diligently for the Occaſions of obſerving theſe Eclipſes carefully, particularly of the Firſt and Second, which are moſt exact for the Purpoſe. The Eclipſes, carefully calculated and ſet down in the *Ephemeris*, will ſerve to advertiſe them and Obſervers in general of the Times when they ſhould attend to theſe Obſervations. The Perſon, who ſhall be under any Meridian different from *Greenwich*, muſt turn his Difference of Longitude into Time; See *Requiſite Tables*, Page 38, and add it to or ſubſtract it from the Time of the Eclipſe ſet down in the *Ephemeris*, according as he is to the Eaſt or Weſt of *Greenwich*, to find the apparent Time at which the Eclipſe will happen at his Meridian, nearly. He muſt further take care to regulate his Watch or Clock by apparent Time, or at leaſt to know the Difference, as well in order to apprize him of the Time to look out for the Eclipſe, as for aſcertaining the apparent Time exactly at which he ſhall obſerve it. Equal Altitudes of the Sun or Stars taken with an Aſtronomical Quadrant afford the beſt Means of regulating Clocks and Watches for occaſional Obſervations; or they may be taken with a *Hadley*'s Quadrant, by Reflection from a Baſon of Water or Quickſilver, or from the Horizon of the Sea, if the Obſerver has an open Proſpect, and is not elevated above 5 or 6000 Feet above the Level of the Sea. But, if Opportunity does not admit of taking equal Altitudes, the Time may be determined from One Altitude taken in any of the Methods above-mentioned, at leaſt Two or Three Points of the Compaſs diſtant from the Meridian, but the nearer to the Eaſt or Weſt the better, the Latitude of the Place being known, or being found by Obſervations of the Meridian Altitude of the Sun or Stars made on Purpoſe. It will be better to take ſeveral Altitudes in order to take a Mean of the Reſults for greater Certainty. And if one Star be obſerved to the Eaſt and the other to the Weſt of the Meridian, the Time will be determined with rather more Certainty. The Manner of computing the apparent Time from the Altitude of the Sun or a Star is ſhewn in Problems VIII. and IX. Pages 25 and 26 of the Explanation and Uſe of the *Requiſite Tables*.

The Obſerver, being in a Place whoſe Longitude is well known, ſhould be ſettled at his Teleſcope Three Minutes before the expected Time of an Immerſion of the firſt Satellite; Six or Eight Minutes before that of the ſecond and third Satellites; and a Quarter of an Hour or more before that of the fourth Satellite; chiefly on account of the Uncertainty of their Theories; but, if the Longitude of the Place is very uncertain, he muſt begin to look out for the Eclipſe proportionably ſooner: Thus, if the Longitude of the Place is uncertain to 3 Degrees, anſwering to 12 Minutes of Time, he ought to fix himſelf to his Teleſcope 12 Minutes ſooner than is mentioned above. Nevertheleſs, when he has obſerved One Eclipſe of any Satellite, and thereby found the Error of the Tables, he may allow the ſame Correction to the Calculations of the *Ephemeris* for ſeveral Months, which will advertiſe him very nearly of the Time of expecting the Eclipſes of the ſame Satellite, and diſpenſe with his attending ſo long.

The Immerſions ſignify the Inſtant of the Diſappearance of the Satellite by entering into the Shadow of Jupiter; and the Emerſions ſignify the firſt Inſtant of its Appearance at coming out of the ſame. They generally happen when the Satellite is at ſome Diſtance from the Body of Jupiter, except near the Oppoſition of Jupiter to the Sun, when the Satellite approaches nearer to his Body. Before the Oppoſition of Jupiter to the Sun the Immerſions and Emerſions happen on the Weſt Side of Jupiter, and after the Oppoſition on the Eaſt Side; but, if an aſtronomical Teleſcope be uſed, which reverſes Objects, the Appearance will be directly the contrary. Before the Oppoſition, the Immerſions only of the firſt Satellite are viſible; and after the Oppoſition, the Emerſions only. The ſame is generally the Caſe with reſpect to the ſecond Satellite; both the Phænomena of the ſame Eclipſe are frequently obſervable in the Two outer Satellites. The Immerſions and Emerſions marked with an Aſteriſk in the *Ephemeris* are thoſe viſible at *Greenwich*.

To know if an Eclipſe will be viſible in any Place, find whether Jupiter be 8° above the Horizon of the Place, and the Sun as much below it. This may be done near enough by a celeſtial Globe: Otherwiſe, the Time of the Sun's Riſing and Setting may be found for any Latitude by a Table of ſemidiurnal Arcs, contained in the popular Book called *The Mariner's Compaſs Rectified,* and many other Books; the Time of Jupiter's Riſing and Setting may alſo be found from the Time of his paſſing the Meridian and Declination ſet down in the *Ephemeris,* with the Help of the ſame Table of ſemidiurnal Arcs; adding or ſubſtracting the ſemidiurnal Arc anſwering to the ſame Declination of the Sun: Remembering always, that if Jupiter's Declination and the Latitude of the Place are of the ſame Denomination, the ſemidiurnal Arc will be more than Six Hours, and if they are of contrary Denominations, will be leſs than Six Hours. But it may be eaſier found whether the Eclipſe will be viſible at *Greenwich,* or whether it ſhould be properly marked with an Aſteriſk, by the Tables, Page 28—31, annexed to the *Nautical Almanac* of 1772.

The Immerſion or Emerſion of any Satellite being carefully obſerved in any Place according to apparent Time, the Longitude from *Greenwich* is found immediately by taking the Difference of the Obſervation from the correſponding Time ſhewn in the *Ephemeris,* which muſt be turned into Degrees, *&c.* by *Requiſite Tables,* Page 38; and will be Eaſt or Weſt of *Greenwich,* as the Time obſerved is more or leſs than that of the *Ephemeris.*

Example: Suppoſe an Emerſion of the firſt Satellite ſhould be obſerved at the *Cape of Good Hope,* May 9, 1767, at 10h. 46′. 45″. apparent Time: The Time by the *Ephemeris* being 9h. 33′. 12″, the Difference is 1h. 13′. 33″, whence the Longitude of the *Cape* ſhould be 18°. 23′. 15″, Eaſt of *Greenwich,* becauſe the Time ſuppoſed to be obſerved at the *Cape* is more than that of the *Ephemeris.*

It is to be obſerved that a correſpondent Obſervation of an Eclipſe of a Satellite of Jupiter, made under a well-known Meridian, is to be preferred to the Calculations of the *Ephemeris* for comparing with an Obſervation made in a Meridian whoſe Longitude is required; but if no correſponding Obſervation can be obtained, as is frequently the Caſe, it will be beſt to find what Correction the Calculations of the *Ephemeris* require by the neareſt Obſervations to the given Time that can be obtained; which Correction applied to the Calculation of the given Eclipſe in the *Ephemeris,* renders it almoſt equivalent to an actual Obſervation.

The Longitudes and Latitudes of the Planets, Page IV, ſerve to know where to look for them in the Heavens, and when their Places may be conveniently ſettled by comparing them with fixed Stars by the Help of a Micrometer in a Teleſcope. They alſo ſhew when they are in the moſt important Points of their Orbits, where it is moſt material to obſerve them. They alſo ſerve to enable Perſons leſs ſkilled to diſtinguiſh them from the fixed Stars. Their Declinations and the apparent Times of their paſſing the Meridian are particularly uſeful to Aſtronomers who are furniſhed with Quadrants and Tranſit Inſtruments well fixed in the Meridian, in ſetting their Inſtruments for obſerving their right Aſcenſions and Declinations.

The apparent Time of a Planet's paſſing the Meridian may be computed thus; the Planet's right Aſcenſion being calculated from its Longitude and Latitude, and turned into Time, ſubſtract the Sun's right Aſcenſion at Noon in Time from it, to find the Time of the Planet's paſſing the Meridian nearly, which call T; take the Difference of the ☉ and Planet's daily Variations in right Aſcenſion in Time, if the Planet is progreſſive in right Aſcenſion, or the Sum, if it is retrogade, which call X; then ſay, by the Rule of Proportion;

As $24^{h}. \pm X : T :: X : e$ and $T \pm e$ will be the correct Time of the Planet's paſſing the Meridian. The upper Signs are to be uſed both to X and e if the Planet's progreſſive Motion in right Aſcenſion be greater than that of the Sun; in any other Caſe the lower Signs are to be made Uſe of.

But perhaps it may be found more readily by continual Approximation as follows: Take the proportional Part of the Difference or Sum of the ☉ and Planet's daily Motion in right Aſcenſion, anſwering to the Time of the Planet's paſſing the Meridian, found nearly, in Proportion to 24^{h}. and take a further like proportional Part of this proportional Part; and again of this laſt, and ſo on as far as is neceſſary. The Sum of all theſe proportional Parts added to the Time of the Planet's paſſing the Meridian found nearly, if the Planet's progreſſive Motion in right Aſcenſion is greater than that of the Sun, otherwiſe ſubſtracted, gives the apparent Time of the Planet's paſſing the Meridian.

Example: Let it be required to find the Time of the Moon's paſſing the Meridian, July 1, 1767.

The

The Sun's right Aſcenſion in Time July 1ſt is, 6^{h}. 40'. 25'', and July 2d, 6^{h}. 44'. 33'', by the *Ephemeris*. Therefore his daily Motion in right Aſcenſion is 4'. 8''. The Moon's right Aſcenſion July 1ſt at Noon by the *Ephemeris* is 159°. 2'. anſwering to 10^{h}. 36'. 8''. of Time, and July 2d is, 169°. 39'. anſwering to 11^{h}. 18'. 36''. The Difference is, 42'. 28''. of Time, from which 4'. 8''. being ſubſtracted, leaves 38'. 20''. Subſtract 6^{h}. 40'. 20''. the Sun's right Aſcenſion July 1ſt at Noon, from 10^{h}. 36'. 8''. the Moon's right Aſcenſion the ſame Noon, the Remainder 3^{h}. 55'. 43''. is the Approximate Time of the Moon's paſſing the Meridian. The proportional Part of 38'. 20''. anſwering to this, is 6'. 17''. and the proportional part of 6'. 17''. is 9''; therefore 6'. 17''. and 9''. or 6'. 26''. added to 3^{h}. 55'. 43''. give 4 2'. 9''. the apparent Time of the Moon's paſſing the Meridian. In the *Ephemeris* it is 4^{h}. 2'. It may alſo be computed by taking the Difference of the Moon's right Aſcenſion at Noon and Midnight, but then Half the Sun's daily Variation in right Aſcenſion muſt be made uſe of, and Proportion muſt be made for 12 inſtead of 24 Hours: and if the Moon paſſed the Meridian after Midnight, the Sun's right Aſcenſion at Midnight muſt be uſed, which is a Mean between his right Aſcenſions on the preceding and ſubſequent Noon. For the Planets, it will be ſufficient to take the firſt proportional Part only.

The Days of the Oppoſitions, Quadratures, &c. of the Planets to the Sun, are Times at which they ought to be obſerved in fixed Obſervatories, for ſettling the Elements of their Orbits by a Series of ſeveral Years Obſervations,

The Vth, VIth, VIIth, VIIIth, IXth, Xth, and XIth Pages of each Month contain the Moon's Place, and all the Circumſtances relating to her Motion, and her Diſtances from the Sun and proper Stars, from which her Diſtance ſhould be obſerved for finding the Longitude at Sea. The Longitude, Latitude, and Declination of the Moon, and Time of her paſſing the Meridian, afford the like Uſes with the ſame Circumſtances of the Planetary Motions, and many more beſides. For the ſake of greater Preciſion, the Moon's Longitude, Latitude, Right Aſcenſion, Declination, Semidiameter, horizontal Parallax, with its proportional Logarithm, are computed Twice a Day, to Noon and Midnight, and may readily be inferred to any intermediate Time with the greateſt Exactneſs.

Example: Let it be required to find the Moon's Longitude and Latitude, &c. July 16, 1767, at 16^h. 22′. 16″.

First to find the Longitude.

The Moon's Longitude, July 16, at 12^h. is 6^s. 6°. 40′. 25″, and July 17, at Noon, 0^s. 13°. 47′. 48″. the Difference 7°. 7′. 23″. is the Moon's Motion in 12 Hours; ſay then, by the Rule of Proportion,

As 12^h. is to 4^h. 22′. 16″ (the exceſs of 16^h. 22′. 16″ above 12^h.) ſo is 7°. 7′. 23″. to 2°. 35′. 41″. but this muſt be corrected on account of the Moon's unequal Motion in 12 Hours, by the Table of Equation of ſecond Difference annexed to Mr. *Taylor*'s *Sexageſimal Table*, Page 244—247: for this Purpoſe take out of the *Ephemeris* the Two Longitudes of the Moon next preceding the given Time, and the Longitudes immediately following it, and ſet them down in Order one after another, as follows;

	☽'s Long. by the *Ephem.*	1ſt Diff.	2d Diff.	Mean of 2d Dif.
1767,	s ° ′ ″	° ′ ″	′ ″	′ ″
July 16, Noon	11.29.29.34			
Midn.	0. 6.40.25	7.10.51	3.28	
17, Noon	0.13.47.48	7. 7.23	3.44	3.36
Midn.	0.20.51.27	7. 3.39		

Take their Differences, 7°. 10′. 51″, 7°. 7′. 23″, 7°. 3′. 39″, take the Differences of theſe Differences, or the 2d Differences 3′. 28″; 3′. 44″. and take their Mean which is 3′. 36″. Now look for the Equation of ſecond Difference, anſwering to 4^h. 22′ after Midnight, found on the Side, and 3′. 36″ at Top, which will be found = 24″, and which, according to the Remark at the Bottom of the Table, muſt be added to 2°. 35′. 41″, the firſt proportional Part, becauſe the Motion in 12 Hours or firſt Differences are decreaſing; the Sum 2°. 36′. 5″ added to 0^s. 6°. 40′. 25″, the Moon's Longitude at Midnight, gives 0^s. 9°. 16′. 30″, the Moon's true Longitude, and is as correct as the Longitudes from which it is deduced.

N. B.

N. B. If the firſt Differences of the Four Longitudes of the Moon taken out firſt increaſe and then decreaſe, or, vice verſa, firſt decreaſe and then increaſe, take Half the Difference of the Two ſecond Differences for the Mean ſecond Difference, with which take out the Equation of ſecond Difference, and add or ſubſtract it as the Firſt firſt Difference is greater or leſs than the Third firſt Difference.

To find the Moon's Latitude.

Take out of the *Ephemeris* the Two Latitudes preceding and Two following the given Time, and ſet them down in Order, and take their firſt and ſecond Differences, and the Mean of the Two ſecond Differences; find the proportional Part of the Middle firſt Difference anſwering to the Hours and Minutes, *&c.* of the given Time after Noon or Midnight; which correct in the following Manner: Entering Table of Equation of ſecond Difference, Page 244—247, with the Hour from Noon or Midnight on the Side, and the Mean ſecond Difference at Top, take out the correſponding Number of Seconds, which added to or ſubſtracted from the proportional Part found above, according as the Motion in 12 Hours or firſt Difference is decreaſing or increaſing; or, more generally, according as Firſt firſt Difference is greater or leſs than Third firſt Difference, gives the proportional Part corrected; which now added to or ſubſtracted from the Moon's Latitude at the preceding Noon or Midnight, as the Latitude in theſe 12 Hours is increaſing or decreaſing, gives the Moon's Latitude correct.

Example: The Moon's Latitude is required, July 16, 1767, at 16ʰ. 22′. 16″.

	☽'s Lat. by the *Ephem.*	1ſt Dif.	2d Dif.	Mean of 2d Dif.
1767,	° ′ ″	′ ″	′ ″	′ ″
July 16, Noon	4.31.10 N			
		18.26		
Midnight	4.49.36		4.36	
		13.50		4.40
17, Noon	5. 3.26		4.44	
		9. 6		
Midnight	5.12.32			

The Moon's Latitude July 16 at Midnight being 4°. 49′. 36″ N. and the Motion in the next 12 Hours being 13′. 50″. ſay by Proportion, As 12h. is to 4h. 22′. 16″, ſo is 13′. 50″ to 5′. 2″: but this muſt be corrected by adding 32″, the Equation of ſecond Difference, anſwering to the Hour 4h. 22′, and the Mean ſecond Difference 4′. 40″, becauſe the firſt Differences are decreaſing, or rather becauſe the firſt of them 18′. 26″, is greater than the laſt of them 9′. 6″. therefore the proportional Part corrected is 5′. 2″+32″=5′. 34″, which added to 4°. 49′. 36″, gives 4°. 55′. 10″ N. the Moon's Latitude correct.

Remarks on ſome Circumſtances neceſſary to be attended to, in order to obtain and apply the Correction of ſecond Differences rightly in computing the Moon's Latitude

I. If the Moon's Latitude taken out of the *Ephemeris* for Noon and Midnight changes its Denomination from North to South or from South to North, the Sum of the Two Latitudes of contrary Denominations, where the Change happens, is to be accounted the firſt Difference in that Place.

II. If the Three firſt Differences firſt increaſe and then decreaſe, or vice verſâ, firſt decreaſe and then increaſe, Half the Difference of the Two ſecond Differences is to be taken for the Mean ſecond Difference.

III. If the Series of Four Latitudes taken out ſhould firſt increaſe and then decreaſe about the Moon's greateſt Latitudes, take the Sum of the Two firſt Differences ſtanding on each Side of the greateſt Latitude for the ſecond Difference in that Place; correct the Moon's Latitude at Noon or Midnight by the ſimple proportional Part firſt found; and to the Latitude ſo corrected, add always in this Caſe the Equation of ſecond Difference from Page 244—247, anſwering to the Mean ſecond Differences.

Before I quit this Subject of Interpolation by ſecond Differences, I ſhall point out another Method, by which the ſame End may be obtained more readily, and with fewer Rules, by thoſe who are well acquainted with algebraic Subſtraction and Addition, and the Manner of applying the Signs in thoſe Operations. Subſtract each Latitude from the following for the firſt Differences, to which prefix the Sign — if the Latitudes decreaſe; and ſubſtract each firſt Difference, thus found, from the following one of the ſame Order for the ſecond Differences. Half the Sum of the Two ſecond Differences

ferences ſtanding on each Side of the Interval to be interpolated, is to be accounted the mean ſecond Difference; the Equation correſponding to it by Table, Page 244—247, is to be applied always with the contrary Sign.

Theſe Operations are to be performed, and the Signs to be applied as in algebraic Subſtraction and Addition. Note further, if the four given Latitudes change their Denomination, call the ſecond Latitude +, and thoſe of a contrary Denomination —.

The Moon's Declination may be found at any Hour in the ſame Manner as her Latitude; but as the Correction ariſing from ſecond Differences will never exceed 2′½, this may be neglected on moſt Occaſions; but if any one is deſirous to obtain the Declination true to a Minute, the Correction is eaſily applied, as ſhewn above.

The other Articles of Page VI. and VII. *viz.* the Moon's right Aſcenſion, her Semidiameter, horizontal Parallax, with its proportional Logarithm, and the Diſtances contained in the Four laſt Pages of the Month, may be all found correctly by even Proportion, without requiring any Allowance on account of ſecond Differences. The proportional Part of the Moon's Longitude, *&c.* for any Hour may be found very readily by the Help of the Table of proportional Logarithms, Page 39—55 of the *Requiſite Tables.*

The Moon's Longitude and Latitude are uſed in computing her Diſtances from the Sun and Stars contained in the Four laſt Pages of the Month, as well as in the Appulſes to Stars pointed out in Page I. and, jointly with her Parallax and Semidiameter, are neceſſary for computing the Eclipſes of the Sun and Moon, and the Occultations of fixt Stars and Planets by the Moon. They alſo facilitate the Calculation of the Longitude of any Place from an obſerved Eclipſe of the Sun, or Occultation of a Star or Planet by the Moon: Or, if the Meridian be well known, the Parallax and Semidiameter ſerve to deduce the Moon's true Place in the Heavens from the Obſervation, which compared with that given by the *Ephemeris* ſhews the Error of the Tables at the Time. The Moon's Semidiameter and Parallax are applied in correcting almoſt all Obſervations of the Moon. The proportional Logarithms of the Moon's Parallax ſerve further to facilitate the Calculations of Parallaxes.

The

The Moon's right Aſcenſion and Declination are uſeful to compute her Altitude at any Time, particularly at the Obſervation of her Diſtance from the Sun or a Star, ſuppoſing it was neglected to be or could not be obſerved properly; which latter Caſe may ſometimes happen in the Night, though I think but rarely; the utmoſt Accuracy therein not being required for the Calculations of Refraction and Parallax. See *Britiſh Mariner's Guide*, Page 57, and *Requiſite Tables*, Page 24. The Moon's Declination, with her Semidiameter and Parallax, ſerve for finding the Latitude by the Meridian Altitude of her upper and lower Limb obſerved at Sea. See *Britiſh Mariner's Guide*, Page 93, and *Requiſite Tables*, Page 15. The Moon's right Aſcenſion and Declination ſerve alſo to compute the Time from her Altitude obſerved at the Obſervation of her Diſtance from a Star; whence the Longitude may be inferred, tho' no Altitude of the Sun or a Star was taken for regulating the Time. See *Britiſh Mariner's Guide*, Page 61, and Mr. *Edwards*'s 5th Problem annexed to the *Nautical Almanac* of 1781, Page 10.

The Diſtances of the Moon from the Sun and fixt Stars, contained in the 8th, 9th, 10th, and 11th Pages of the Month, are ſet down to every Three Hours of Apparent Time by the Meridian of *Greenwich*, and are deſigned to relieve the Mariner from the Neceſſity of a Calculation, which he might think prolix and troubleſome, and to enable him, when compared with the Diſtance obſerved carefully at Sea, to infer his Longitude readily and with little Danger of Miſtake to a Degree of Exactneſs that may be thought ſufficient for moſt nautical Purpoſes. But uſeful and valuable as the Practice of this Method may be at preſent, it is a Remark not unworthy our Notice, that every future Improvement of the Lunar Tables, as well as the Inſtruments, will bring it nearer and nearer to Perfection.

The Moon's Diſtances are computed both from the Sun and proper Stars, and generally from One Object on each Side of her, to afford the Mariner a greater Number of Opportunities of Obſervation, and a Means of attaining a greater Degree of Exactneſs. The Diſtances from the Sun are computed between 40° and 120° of Diſtance. While the Moon is between the Diſtances of 20° and 40° from the Sun, her Diſtance is computed only from a Star on the contrary Side that the Sun is. When ſhe is between the Diſtances of 40° and 90° from the Sun, her Diſtance is computed both from the Sun and from a Star on the contrary Side to the Sun; when the Moon is above 90° from the Sun her Diſtance is computed from Two Stars, one on each Side of her; though ſtill her Diſtance is computed alſo from the Sun from 90° to 120°. Though the Diſtance of the Moon from the Sun or Star, well obſerved with a good Inſtrument, is ſufficient to determine the Longitude, with the Help of the *Ephemeris*, always within a Degree, and generally much nearer, yet it will conduce to ſtill greater Accuracy, if the Obſerver takes the Diſtance of the Moon from Two Stars, or the Sun and a Star, or, when the Moon is between 90° and 120° Diſtance from the Sun, from the Sun and Two Stars, if he can be ſo lucky as to obtain theſe ſeveral Obſervations.

The Longitude being computed from the Obſervations made with each Star reſpectively, the Mean of the Reſults is to be taken as probably approaching neareſt to the true Longitude. In particular the Moon's Diſtance ſhould be taken from Two Stars, or the Sun and a Star on each Side of her, as often as Opportunity permits, ſince the Mean of the Reſults will probably be at leaſt as exact again as either ſeparately, I mean as far as depends on any Imperfection of the Inſtruments, and unavoidable ſmall Errors ariſing in the Uſe of them; Errors of theſe Kinds having a natural Tendency to correct each other; for that ſmall Error which ariſes from the Lunar Tables will affect the Reſult from either Star equally. But the Error of *Mayer*'s laſt Lunar Tables as corrected from a Series of Dr. *Bradley*'s Obſervations of 9 Years, by Mr. *Charles Maſon* in 1778, being theſe made uſe of for the *Nautical Almanac* of 1789, and the ſubſequent ones, probably never exceeding 30″, the Uncertainty hence ariſing in the Determination of the Longitude can ſcarcely ever exceed 17 Miles of Longitude, and generally will be much leſs.

The Diſtances ſet down in the *Ephemeris*, afford the Obſerver a ready Means of knowing the Star from which the Moon's Diſtance is to be obſerved; for he has nothing to do but to ſet his Quadrant to the Diſtance computed roughly from the *Ephemeris*, neglecting the Seconds, at the apparent

Time eſtimated nearly by the Meridian of *Greenwich*; and direct his Sight to the Eaſt or Weſt of the Moon, according as the Diſtance at *Greenwich* is found in the VIIIth and IXth, or Xth and XIth Pages of the Month; and having found the Moon upon the little Speculum, let him give a Sweep with the Quadrant to the Right and Left, and he will find the Star he ſeeks for, if above the Horizon and the Air be clear, nearly in a Line perpendicular to the Line of the Moon's Horns or longer Axis, or, which is the ſame Thing, in the Line of the Moon's ſhorter Axis produced. The Star is always one of the brighteſt, ſo that there is little Danger of miſtaking another for it, if the preceding Directions are carefully obſerved. The Time at *Greenwich* is eſtimated nearly by turning the ſuppoſed Longitude from *Greenwich* into Time, by *Requiſite Tables*, Page 38, and adding it to or ſubſtracting it from the apparent Time at the Ship, as its Longitude is Weſt or Eaſt of *Greenwich*. It will be ſufficient if the Diſtance be computed from the *Ephemeris* within 10′, or 20′, for ſetting the Quadrant. The principal Uſe of the Diſtances of the Moon from the Sun and fixt Stars; namely, in determining the Longitude by Compariſon with the correſponding Diſtances obſerved at Sea, is ſhewn in Problem XI. Page 37 of *Requiſite Tables*.

The Diſtances contained in the *Ephemeris* were computed ſtrictly to Noon and Midnight, and thence interpolated for every Three Hours, according to the Method ſhewn for computing the Moon's Latitude, Page 161—163; except that the Correction of ſecond Differences at the Middle of the Interval to be interpolated, was taken $\frac{1}{8}$ of the Mean of the Two ſecond Differences, and at the Firſt and Third Quarter of the Interval was taken $\frac{3}{4}$ of the Correction juſt found at the Middle of the Interval; inſtead of conſulting Mr. *Taylor*'s Table, Page 248 and 249, which would however have given the ſame Reſult. But, at the firſt 12 Hours, when the Diſtances of the Moon from a Star begin, and the laſt 12 Hours, when the Diſtances end, there being only One ſecond Difference inſtead of Two ſecond Differences on each Side to take a Mean of, this Method fails in theſe Caſes, and therefore the following is to be ſubſtituted in its Stead, being derived from Sir *Iſaac Newton*'s Solution of the Problem of drawing

drawing a Curve through the Extremities of any Number of given Ordinates. *Phil. Nat. Princ. Math.* Page 486. Edit. *Londini*, 1726, or Dr. *Horſley*'s complete Edition of Sir *Iſaac Newton*'s Works, Vol. 3d. Page 128.

From Four Diſtances at Noon and Midnight computed ſtrictly to interpolate Three Diſtances at the 3d, 6th, and 9th Hour of the firſt or laſt Interval.

Subſtract each Diſtance from the following, for the firſt Difference, and prefix the Sign —, if the Diſtances decreaſe. Subſtract each firſt Difference thus found from the following One of the ſame Order, for the ſecond Difference: And in like Manner ſubſtract the Firſt ſecond Difference from the following for the third Difference; applying the Signs as in algebraic Subſtraction. Denote the firſt or laſt firſt Difference by *b*; the firſt or laſt ſecond Difference by *c*, according as the Interpolation to be made is for the firſt or laſt 12 Hours; denote alſo the third Difference by *d*; and, *a* being put to ſignify the Diſtance at the Beginning of the Interval, the interpolated Diſtances will be as follows:

At 3d Hour of firſt Interval $a + \frac{1}{4} b - \frac{3}{32} c + \frac{7}{128} d$
At 6th Hour of firſt Interval $a + \frac{1}{2} b - \frac{1}{8} c + \frac{1}{16} d$
At 9th Hour of firſt Interval $a + \frac{3}{4} b - \frac{3}{32} c + \frac{5}{128} d$
Or
At 3d Hour of laſt Interval $a + \frac{1}{4} b - \frac{3}{32} c - \frac{5}{128} d$
At 6th Hour of laſt Interval $a + \frac{1}{2} b - \frac{1}{8} c - \frac{1}{16} d$
At 9th Hour of laſt Interval $a + \frac{3}{4} b - \frac{3}{32} c - \frac{7}{128} d$

In adapting theſe Formulæ to Numbers, great Care muſt be taken about the right Application of the Signs. Thus if *b*, *c* or *d* is Negative, apply the Number expreſſing the Value of that Term of the Formula where it is found with a contrary Sign to that of the Formula.

Let me add in this Place, that if in filling up the firſt and laſt Intervals, a new ſecond Difference has been ſuppoſed in arithmetical Progreſſion with the Two given ones, in order to take a Mean between it and the firſt or laſt ſecond Difference, the Interpolation at the Middle of the Interval or 6th Hour will be had true, the ſame as if the above Formulæ had been uſed; But at the Interpolation of the firſt and third

third Quarter there will be an Error of $\frac{1}{128}$ third Difference; which will be corrected, by appyling + $\frac{1}{128}$ *d* or third Difference, to Number found at the firſt Quarter of the Interval, and — $\frac{1}{128}$ *d* to that found at the third Quarter of the Interval; equally the ſame whether it be the firſt or laſt Interval.

The Configurations of Jupiter's Satellites, Page XII. and laſt, exhibit the apparent Poſitions of the Satellites with reſpect to each other, and to Jupiter at ſuch an Hour of the Evening or Night as they are moſt likely to be obſerved, and ſerve to diſtinguiſh the Satellites from one another. Jupiter is diſtinguiſhed by the Mark ⊙, and the Satellites by Points with Figures annexed, the Figure 1 ſignifying the firſt Satellite, 2 the ſecond Satellite, *&c.* When the Satellite is approaching towards Jupiter, the Figure is put between Jupiter and the Point; and when the Satellite is receding from Jupiter, the Figure is put on the other Side of the Point. The Satellites are in the ſuperior Parts of their Orbits, or furtheſt from the Earth, when they are marked to the right Hand or Weſt of Jupiter approaching him; or to the left Hand or Eaſt of Jupiter receding from him; but are in the inferior Part of their Orbits, or neareſt to the Earth, when they are marked to the right Hand or Weſt of Jupiter receding from him, or to the left or Eaſt of Jupiter approaching him. The Cypher o, ſometimes annexed to the Figure of the Satellite towards the Margin, ſignifies that it is inviſible on the Face of Jupiter; and the black Mark ●, ſignifies that it is inviſible, being eclipſed in Jupiter's Shadow, or behind Jupiter eclipſed by his Body.

THE END.

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